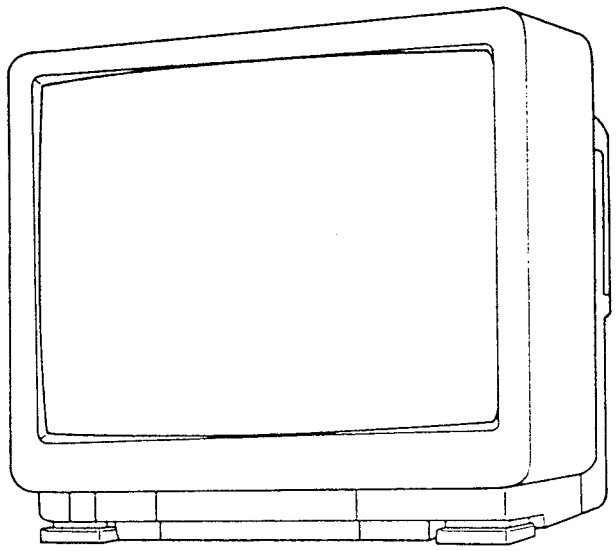
1992

MITSUBISHI

Service Manual



MODEL

CT-21A2EST
CT-21A2EST(Y)
CT-25A2EST
CT-25A2EST(Y)

MITSUBISHI ELECTRIC

SPECIFICATION

Reception System	CCIR-B,G PAL
Reception Frequency	VHF 47MHz~470MHz UHF 470MHz~862MHz
Mains Input	AC230V 50Hz
Power Consumption	95W : [CT-25A2EST/CT-25A2EST (Y)] 86W : [CT-21A2EST/CT-21A2EST (Y)]
Aerial Input	75 Ω
Intermediate Frequency	Video 38.9MHz Sound 33.4MHz/33.16MHz
Audio Output Speaker	10W + 10W (Music Power) 10cm (3.9") round 2pcs
Chassis	EURO 12
Picture Tube	A59ECY13X0125" 110° Deflection : [CT-25A2EST/CT-25A2EST (Y)] A51EAL55X0121" 90° Deflection : [CT-21A2EST/CT-21A2EST (Y)]
Cabinet Dimensions (Approx.)	574mm(W)×509mm(H)×489mm(D) : [CT-25A2EST/CT-25A2EST (Y)] 22.6" 20.0" 19.3" 504mm(W)×453mm(H)×480mm(D) : [CT-21A2EST/CT-21A2EST (Y)] 19.8" 17.8" 18.9"
Weight (Approx.)	28.4kg (62.7 lbs) : [CT-25A2EST/CT-25A2EST (Y)] 23.5kg (51.9 lbs) : [CT-21A2EST/CT-21A2EST (Y)]

SAFETY PRECAUTIONS

NOTICE : Observe all cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.

WARNING

1. An isolation transformer should be used between the television receiver and the AC supply point before any test/service is performed on a HOT chassis television receiver.
2. Operation of these receivers outside the cabinet or with the cover removed, involves a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not throughly familiar with precautions necessary when working on high voltage equipment.
3. Do not install, remove or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while the picture tube is being handled. Keep the picture tube away from the body while handling.
4. When service is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area. Where a short-circuit has occurred, replace those components that indicate evidence of overheating.

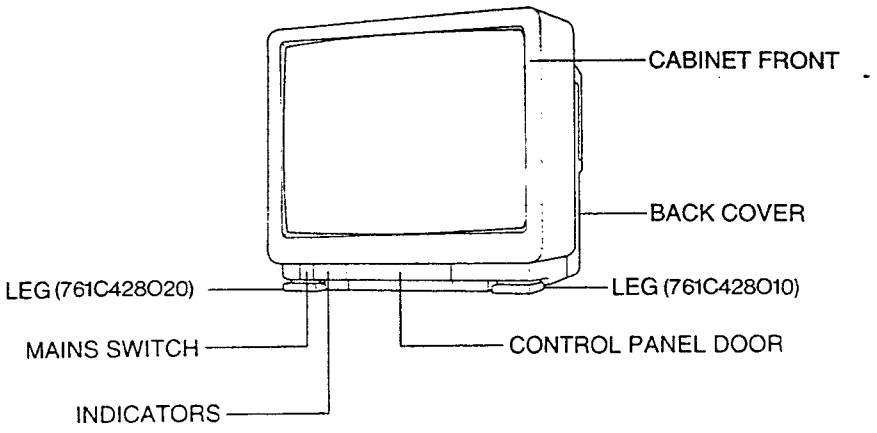
LEAKAGE CURRENT COLD CHECK

Before returning the receiver to the customer, it is recommended that the leakage current be measured according to the following methods.

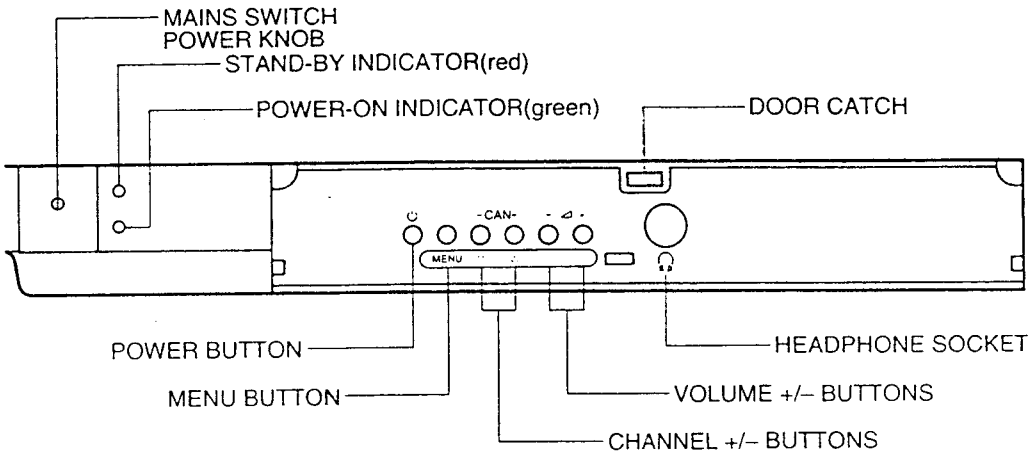
With the AC plug removed from the AC source, place a jumper across the two AC plug prongs. Turn the receiver AC switch on. Using an OHM-METER, connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistance reading of 1 meg ohm. Any resistance below this value indicates an abnormality which requires corrective action.

CONTROLS AND CABINET PARTS

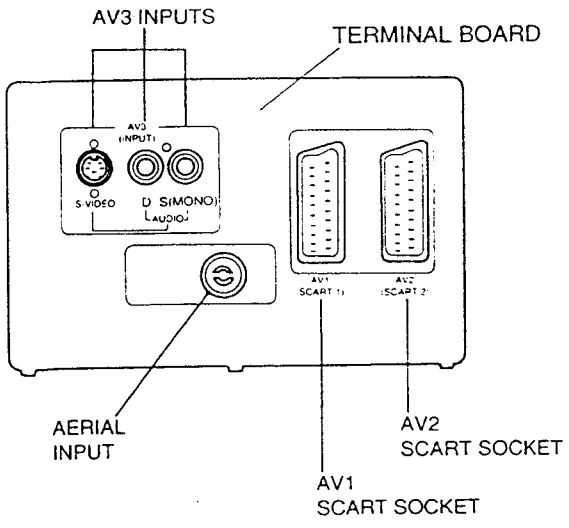
CONTROL LOCATIONS



CONTROL PANEL AND MAINS SWITCH

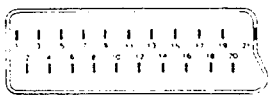


Note: In menu mode, CHANNEL +/– BUTTONS and VOLUME +/– BUTTONS control the menu function.



Rear View

SCARTS SOCKET CONNECTORS



MODE / PIN	AV1	AV2
1	AUDIO OUT R	
2	AUDIO IN R	
3	AUDIO OUT L	
4	AUDIO EARTH	
5	BLUE EARTH	NOT CONNECTED
6	AUDIO IN L	
7	BLUE IN	NOT CONNECTED
8	FUNCTION SWITCH	
9	GREEN EARTH	NOT CONNECTED
10	NOT CONNECTED	
11	GREEN IN	NOT CONNECTED

MODE / PIN	AV1	AV2
12	NOT CONNECTED	
13	RED EARTH	NOT CONNECTED
14	NOT CONNECTED	
15	RED IN	NOT CONNECTED
16	RGB STATUS (BLANKING)	NOT CONNECTED
17	VIDEO EARTH	
18	VIDEO IN EARTH	
19	VIDEO OUT	
20	VIDEO IN	
21	SOCKET EARTH	

The lead wires to be clamped are listed in the table below.

Note: The inner wires are routed or clamped so that they do not come close to the heat generating or high-tension parts. After servicing route all wires in their original position.

The anode lead wires are routed so no tensile strength is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.

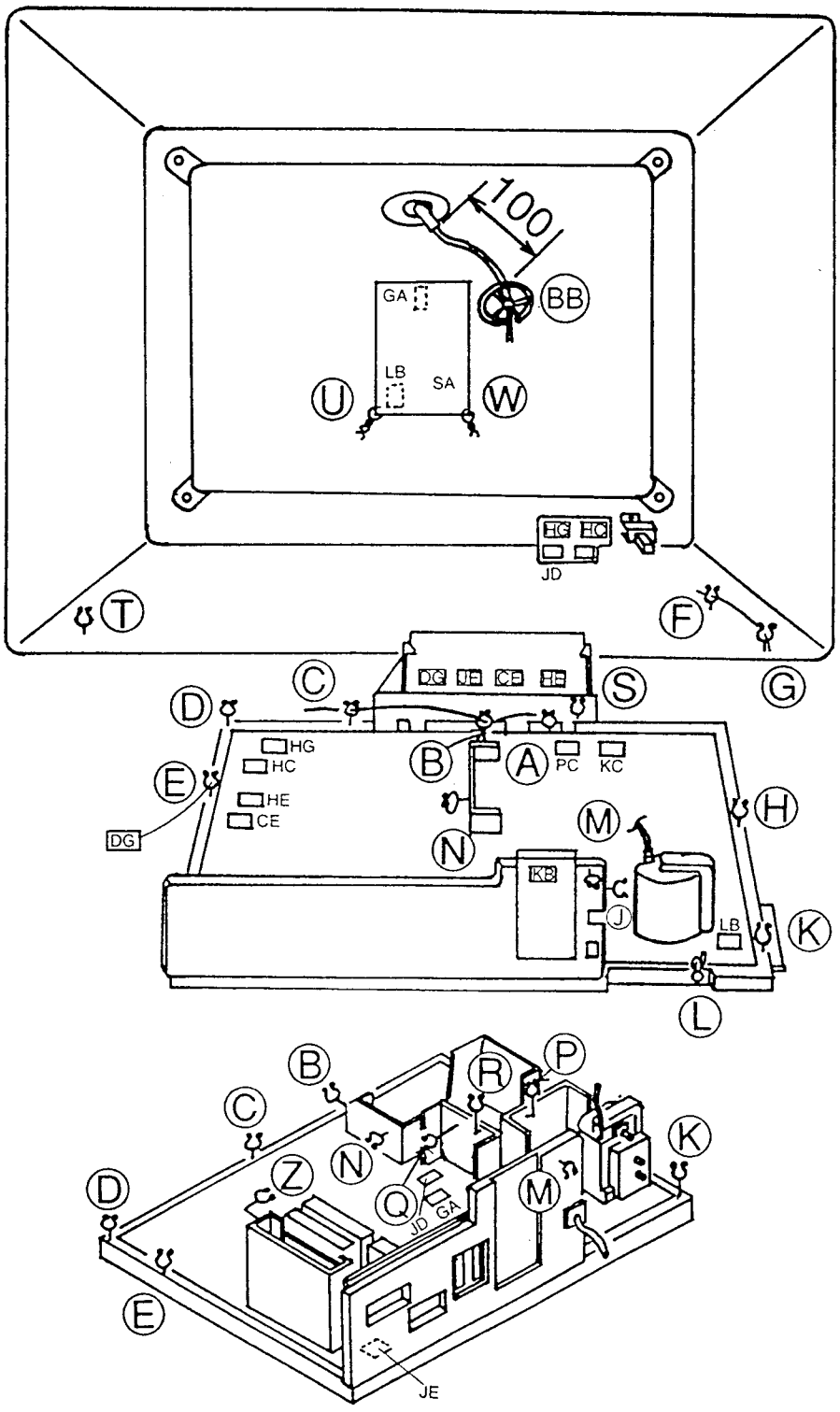
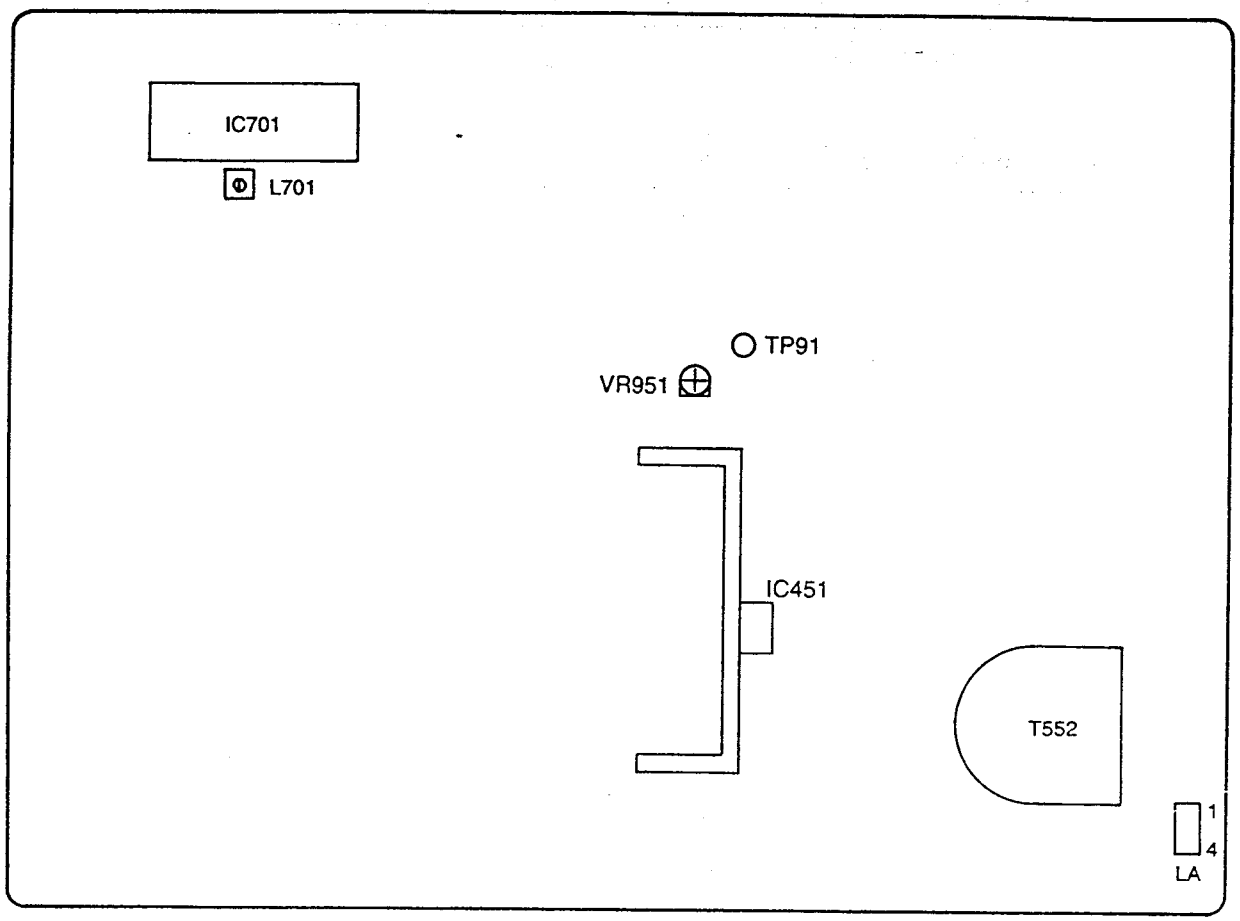


Fig. 1 Lead Dressing

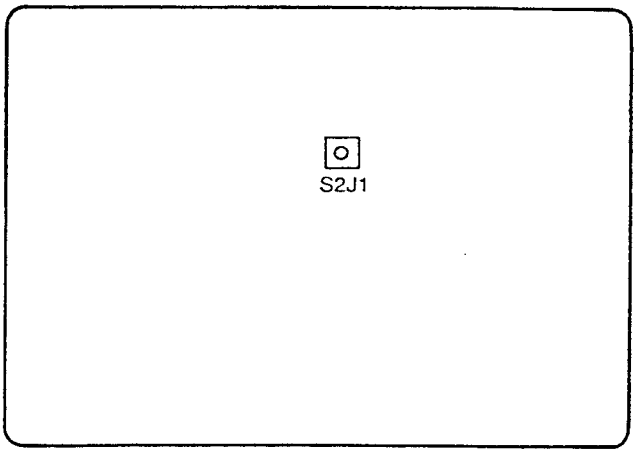
CLAMPER LIST FOR CONNECTOR LEAD

CONNECTOR LEAD	CLAMPER MARK
ANODE-LEAD	BB
CE	A-B-C-D-E
DG	C-D-E
DY	P-R (make a loop)-Q
FOCUS-LEAD	J-W
GA	R-U
HC	A-B-C-D-T-E-D
HE	A-B-C-D-E
HG	A-B-C-D-T-E-D
HJ	A-B-C
JD	A-B-C-N (make a loop) -Q
JE	A-B-C-D-E-Z
KB	M-J-L-K-H-G-F
KC	S-G-F-G-H (make a loop)
LB	L-J
PC	F-S
SA	W (2 layer clamp)
SCREEN-LEAD	L-J-W-U

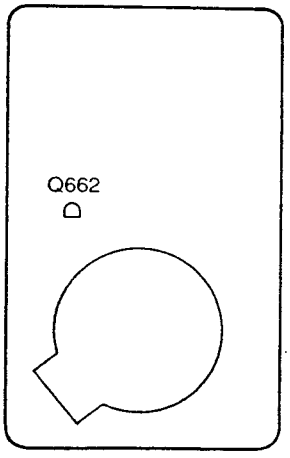
MAIN PCB (COMPONENT SIDE)



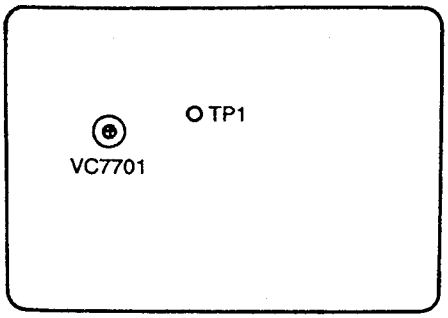
AV PCB (COMPONENT-SIDE)



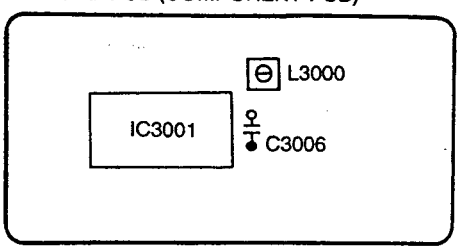
CRT PCB (COMPONENT SIDE)



TEXT PCB (COMPONENT SIDE)



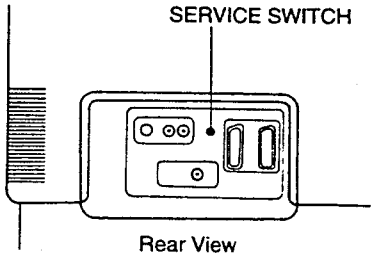
SOUND-PCB (COMPONENT-PCB)

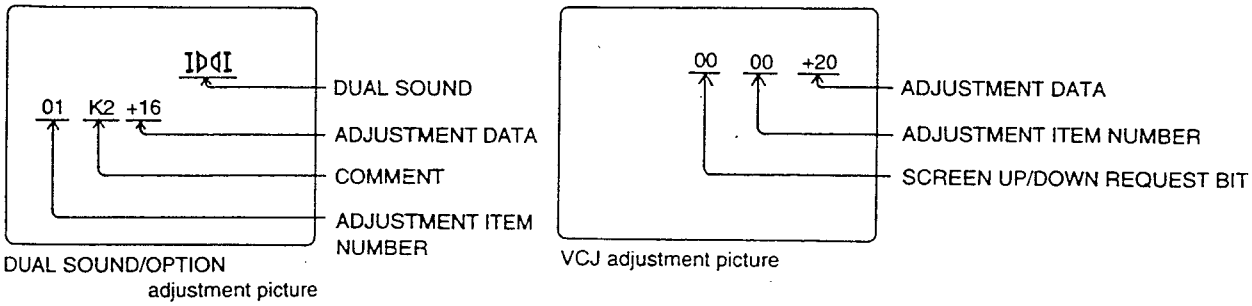


OPERATING THE REMOTE HAND UNIT

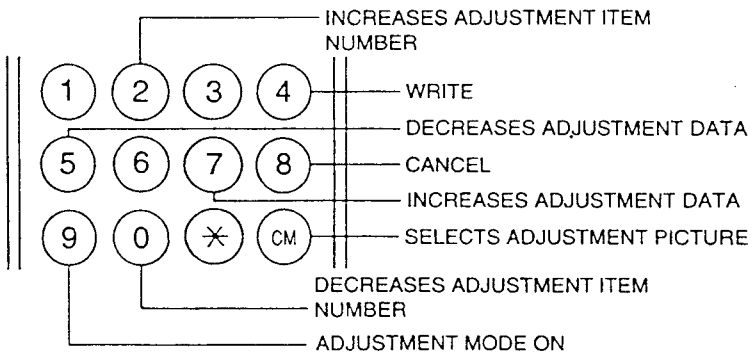
This model is normally adjusted with the remote hand unit and can memory the adjustment data in the EEPROM.

1. Turn the power on. Press the Service switch (S2J1) and the button "9" within five seconds to set the adjustment mode.
2. Press "CM" button to select the VCJ or the DUAL SOUND/ OPTION adjustment picture.



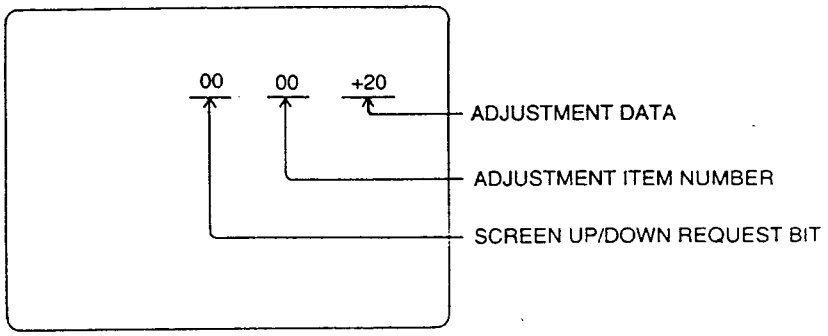


3. Press the button "2" (to increase the adjustment item number) or "0" (to decrease the adjustment item number) to select an adjustment item.
4. Press the button "7" (to increase the adjustment data value) or "5" (to decrease the value).
5. When completing your adjustment, press the button "4" (WRITE) to write the adjustment data in the EEPROM.
   • If cancelling your changed data, for example, because of your mistake, press the button "8" or set power off. The data will be set the former adjustment data before your adjustment.



Before Adjusting

1. Supply RF signal (programme).
2. Press the Service switch (S2J1) and the button "9" within five seconds to set the adjustment mode.
3. Press "CM" button to select the VCJ adjustment picture.
4. Make sure the Screen Up/Down Request Bit is "00".
   If not so, set it to "00" with the Screen control on the Flyback Transformer.

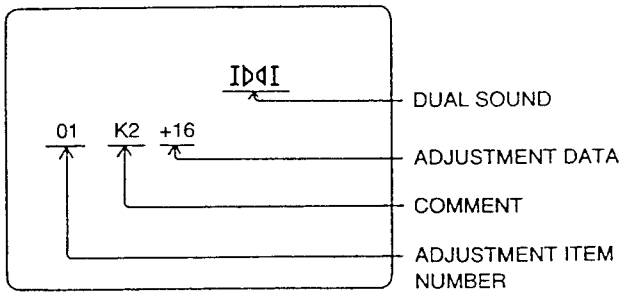


VCJ adjustment picture

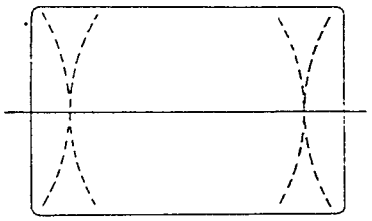
ADJUSTMENT

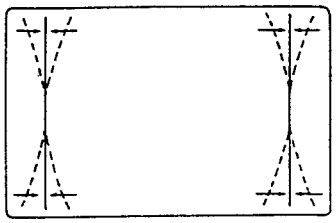
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
1	OPTION	• 03 (TUNER PACK) • 04 (E11 / E12) • 05 (DUAL SOUND) • 06 (COLOUR) • 07 (TEXT) • 08 (AV4) • 09 (NICAM IC)	1. Select the DUAL SOUND/OPTION adjustment picture. 2. Press the button "2" or "0" on the remote hand unit to select the adjustment item numbers. Set each value of the adjustment item numbers as shown in table below. 3. Press the button "4" (WRITE) on the remote hand unit to write in the EEPROM.

Model	Adjustment Item Number						
	03	04	05	06	07	08	09
CT-25A2EST	2	0	2	2	1	0	0
CT-21A2EST	2	0	2	2	1	0	0
CT-25A2EST(Y)	2	0	2	2	2	0	0
CT-21A2EST(Y)	2	0	2	2	2	0	0



DUAL SOUND/OPTION adjustment picture

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		Deflection Circuit	
* Before adjusting, set the adjustment item number "01" (V-Breathing Correction) to "–32".			
2	PAL HORIZONTAL CENTRE	• 09 (H-PHASE)	1. Connect a VCR and play an alignment tape (PAL-Monoscope). 2. Select the VCJ adjustment picture. 3. Set the adjustment item number to "09" with the button "2" or "0" on the remote hand unit. 4. Adjust both horizontal marker width equally with the button "5" or "7" on the remote hand unit.
3	PAL HORIZONTAL WIDTH (25" ONLY)	• 06 (H-AMP)	1. Connect a VCR and play an alignment tape (PAL-Monoscope). 2. Select the VCJ adjustment picture. 3. Set the adjustment item number to "06" with the button "2" or "0" on the remote hand unit. 4. Adjust both horizontal width appropriately with the button "5" or "7" on the remote hand unit.
4	PAL EAST-WEST PCC (25" ONLY)	• 05 (CORNER CORRECTION)	1. Supply EXT signal (PAL-Cross hatch). 2. Select the VCJ adjustment picture. 3. Set the adjustment item number to "05" with the button "2" or "0" on the remote hand unit. 4. Set the adjustment data value to "-32" with the button "7" or "5" on the remote hand unit.
		• 03 (PARABOLA TILT)	5. Set the adjustment item number to "03" (PARABOLA TILT) with the button "2" or "0" on the remote hand unit. 6. Observing the second line from both ends on the screen. Make the upper and lower distortions symmetrical with the button "7" or "5" on the remote hand unit.  To be continued to the next page.

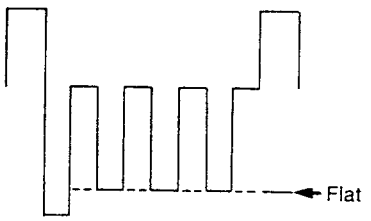
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		• 02 (PARABOLA-TILT)	7. Set the adjustment item number to "02" (PARABOLA-AMP) with the button "2" or "0" on the remote hand unit. 8. Make both vertical lines straight with the button "7" or "5" on the remote hand unit. Repeat step 1 to 7 above, if necessary.  9. Connect a VCR and play an alignment tape (PAL-Monoscope). 10. Make sure the horizontal width and horizontal centre. If shifted, adjust PAL Horizontal Centre (No. 2) and PAL Horizontal Width (No. 3) again.

<table>
<tr><th>No.</th><th>ITEM</th><th>ADJ. METHOD</th><th>ADJUSTMENT PROCEDURE</th></tr>
<tr><td>5</td><td>PAL HEIGHT AND LINEARITY</td><td>• 00 (V-AMP)
• 04 (V-LIN)</td><td>1. Connect a VCR and play an alignment tape (PAL Monoscope).
2. Select the VCJ adjustment picture.
3. Press "OPTIMUM" button.
4. Set the adjustment item number to "00" (V-HEIGHT) with the button "2" or "0" on the remote hand unit.
5. Set the central circle of monoscope signal to true circle with the button "7" or "5" on the remote hand unit.
6. Set the adjustment item number to "04" (V-LIN) with the button "2" or "0" on the remote hand unit.
7. Equal a size ratio of the upper and lower of the largest circle in the centre, on the basis of the horizontal marker in the Monoscope signal with the button "7" or "5" on the remote hand unit.
8. Set the adjustment item number to "00" (V-HEIGHT) with the button "2" or "0" on the remote hand unit.
9. Set the central circle of monoscope signal to true circle with the button "7" or "5" on the remote hand unit.
10. Repeat steps above, if necessary.</td></tr>
<tr><td>6</td><td>PAL VERTICAL CENTRE POSITION</td><td>• 08 (V-POSITION)</td><td>1. Connect a VCR and play an alignment tape (PAL Monoscope).
2. Select the VCJ adjustment picture.
3. Set the adjustment item number to "08" (V-POSITION) with the button "2" or "0" on the remote hand unit.
4. Set the deviation of horizontal marker of Monoscope within ±3mm from the vertical centre on the screen with the button "7" or "5" on the remote hand unit.</td></tr>
<tr><td>7</td><td>NTSC DEFLECTION CIRCUIT</td><td>• 33 (H-PHASE)
• 31 (H-AMP)
• 30 (PARABOLA-AMP)
• 2F (V-AMP)
• 32 (V-POSITION)</td><td>1. Supply EXT signal (NTSC Cross hatch).
2. Select the VCJ adjustment picture.
3. Select the Adjustment Item numbers with the button "2" or "0" on the remote hand unit to adjust as shown in table below with the button "7" or "5" on the remote hand unit.
<table>
<tr><th rowspan="2">Model</th><th colspan="5">Adjustment Item Number</th></tr>
<tr><th>33</th><th>31</th><th>30</th><th>2F</th><th>32</th></tr>
<tr><td>CT-25A2EST</td><td>+5</td><td>+2</td><td>+2</td><td>+2</td><td>−12</td></tr>
<tr><td>CT-21A2EST</td><td>+4</td><td>—</td><td>—</td><td>+2</td><td>−10</td></tr>
<tr><td>CT-25A2EST(Y)</td><td>+5</td><td>+2</td><td>+2</td><td>+2</td><td>−12</td></tr>
<tr><td>CT-21A2EST(Y)</td><td>+4</td><td>—</td><td>—</td><td>+2</td><td>−10</td></tr>
</table></td></tr>
</table>

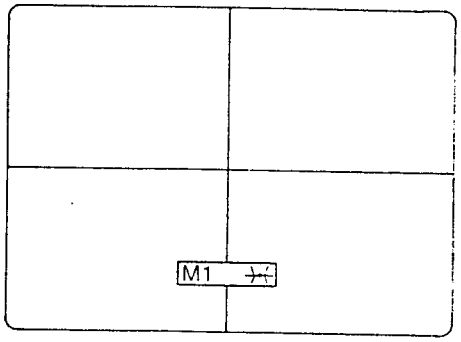
No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
8	WHITE	• 0A (B-DRIVE) • 0B (G-DRIVE) • 0C (R-DRIVE)	1. Connect a VCR and play an alignment tape (PAL Monoscope). 2. Select the VCJ adjustment picture. 3. Set the adjustment item number of "0A", "0B" and "0C" to all "0" with the button "2" or "0" and "7" or "5" on the remote hand unit. 4. Adjust the adjustment item numbers "0A" and "0C" to set white on the screen to the best.
9	FOCUS	• FOCUS control (Flyback Transformer)	1. Supply RF signal (PAL programme). 2. Adjust FOCUS control to the best overall focus.

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		VIDEO CIRCUITS	
		* Perform the following adjustment after adjusting the Deflection Circuit adjustment. * Turn on power over 20 minutes before this adjustment for complete warm-up.	
10	Video Circuits	• SCREEN control (Flyback Transformer)	1. Connect a VCR and play an alignment tape (PAL Monoscope). 2. Select the VCJ adjustment picture. 3. Make sure that Screen Up/Down Request Bit is "00". If not so, set it to "00" with the SCREEN control on the Flyback Transformer. 4. Supply EXT signal (PAL Cross hatch). 5. Adjust SCREEN control on the Flyback Transformer so that Screen Up/Down Request Bit is "00". Supply Monoscope signal again to make sure that Screen Up/Down Request Bit is "00".
		• 0F (COLOUR SATURATION) • 0E (BRIGHTNESS)	6. Supply EXT signal (PAL Colour Bar). 7. Set the adjustment item number to "0F" (COLOUR SATURATION) with the button "2" or "0" on the remote hand unit. 8. Set the adjustment data value to "-32" with the button "7" or "5" on the remote hand unit. 9. Set the adjustment item number to "0E" (BRIGHTNESS) with the button "2" or "0" on the remote hand unit. 10. Make sure that the blue bar area does not brighten. 11. Turn the red bar area a little brighter without brightening the former blue bar area with the button "7" or "5" on the remote hand unit.
		• DC ammeter's (+)lead to the connector LA pin ① (MAIN-PCB) and (-) lead to the connector LA pin ④ (MAIN PCB) • 0D (CONTRAST)	12. Set the adjustment item number to "0D" (CONTRAST) with the button "2" or "0" on the remote hand unit. 13. Set the beam current to value of following table with the button "7" or "5" on the remote hand unit. 14. If in the Step 13 the blue bar area brightens, set the adjustment item number "0E" (BRIGHTNESS) to dark. 15. Make sure that Screen Up/Down Request Bit is "00". If not so, repeat step 1 to 13 above.

	25 inch	21 inch
Beam Current	700±20μA	600±20μA

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
11	COLOUR OUT-PUT	• Oscilloscope CH-1 to the Base of Q662 (CRT PCB) • 0F (COLOUR SATURATION)	*Perform the adjustment after the White and Video Circuit adjustment. 1. Supply EXT signal (PAL Colour bar). 2. Select the VCJ adjustment picture. 3. Set the adjustment item number to "0F" (COLOUR SATURATION) with "2" or "0" on the remote hand unit. 4. Adjust the waveform as shown in figure below with the button "7" or "5" on the remote hand unit. 
		• 10 (HUE)	5. Set the adjustment item number to "10"(HUE) with the button "2" or "0" on the remote hand unit. 6. Set the adjustment data value to"0" with the button "7" or "5" on the remote hand unit. 7. After completing the steps above, increase five digits in the adjustment item number "0F" (COLOUR SATURATION).

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		Dual Sound Circuit	
* Allow the receiver (having a dual sound circuit) to warm up for at least three minutes before starting the adjustment.			
12	SOUND DETECTION COIL	• Oscilloscope to C3006 (+) side (SOUND PCB) • L3000 (SOUND PCB)	1. Apply RF signal of dual sound mode specified in Table 1. The video signal shall be basically a colour bar signal. The Channel is not specifically designed. Table 1 Amplitude Modulation Ratio of Pilot Signal: 50% Main channel: 1kHz, FM 100% modulation (with 30kHz deviation) Sub-channel: 400Hz, FM 100% modulation (with 30kHz deviation) Input signal strength: 70dBμ (75Ω terminated) 2. Adjust L3000 for maximum amplitude of the 400Hz sub-channel sound detection output on the scope. **Note :** Amplitude of the signal shall be 0.5 Vp-p and more. 3. Make sure the waveform is not distored.
13	DETECTION OUTPUT BALANCE	• Oscilloscope to IC3001 pin ⑦ (SOUND PCB) • 01 (K2)	1. Cancel the modulation of the Main channel sound specified in Table 1. 2. Select the DUAL SOUND/OPTION Adjustment Picture. 3. Set the adjustment item number to "01" (K2) with the button "2" or "0" on the remote hand unit. 4. Set the amplitude of 400Hz output signal to the minimum with the button "7" or "5" on the remote hand unit. This adjustment should be performed carefully to determine the crosstalk between the left and right channel sound.

No.	ITEM	ADJ. METHOD	ADJUSTMENT PROCEDURE
		Micro Computer Circuit	
14	DISPLAY POSITION	• L701 (MAIN PCB)	1. Supply RF signal (Programme). 2. Press "OPTIMUM" button on the remote hand unit. 3. Adjust L701 (CHARA) so that the Optimum Display should be in the middle of the horizontal width of the picture.  Optimum Display
		Text Circuit	
* Turn on power over five minutes before this adjustment for complete warm-up.			
15	TELETEXT FREE RUN FREQUENCY	• Frequency counter to TP1 (TEXT PCB) • VC7701 (TEXT PCB)	1. Set the no signal condition in the RF mode. 2. Adjust VC7701 so that the frequency is 6000.2± 0.2kHz.
		Power Circuit	
16	B4 VOLTAGE (21" ONLY)	• DC voltmeter's(+) lead to TP91 (MAIN PCB) and (–) lead to radiator of IC451 (MAIN PCB) • VR951 (MAIN PCB)	1. Supply EXT signal (grey stair step signal). 2. Push "OPTIMUM" button on the remote hand unit. 3. Adjust VR951 (DC-SET) so that voltage is 122V.

WHEN CHANGING IC702 (EEPROM)

NOTE: When changing IC702 (EEPROM), format it in accordance with step 2 and 3 below.
(Do not perform step 1 and 4.)
NOTE: If formatting IC702 (EEPROM) again, perform step 1 to 4 below.

1. Turn the Main switch off. Connect IC701 pin 23 through 100Ω (1/4 W) resistor to GND.
2. Turn the Main switch on, when EEPROM starts to be formatted with the STAND BY LED indicating.
   • It will take about three seconds to be formatted.
   • The remote hand unit and the switches of this model can't be performed during format.
3. Press the power button on the remote hand unit to make sure finishing the format.
   When the power turns on, the format is completed.
4. Remove the resistor connected to IC702 pin 23.

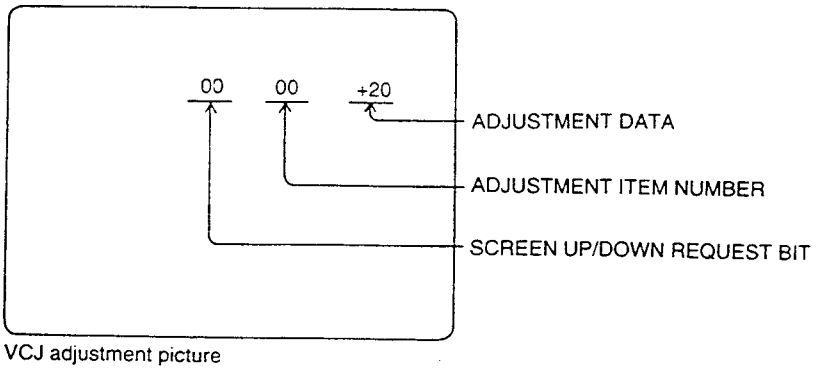
Initial Value of EEPROM

VCJ		
ADJUSTMENT ITEM NUMBER	INITIAL VALUE	ITEM
00	0	V-AMP
01	0	V-BREATHING CORRECTION
02	0	PARABOLA-AMP
03	0	PARABOLA-TILT
04	0	V-LIN
05	0	CORNER CORRECTION
06	0	H-AMP
07	0	—
08	0	V-POSITION
09	0	H-PHASE
0A	0	BLUE DRIVE
0B	0	GREEN DRIVE
0C	0	RED DRIVE
0D	0	CONTRAST
0E	0	BRIGHTNESS
0F	0	COLOUR SATURATION
10	0	HUE
17	111	—
18	010	—
2F	0	V-AMP (NTSC)
30	0	PARABOLA-AMP (NTSC)
31	0	H-AMP (NTSC)
32	0	V-POSITION (NTSC)
33	0	H-PHASE (NTSC)

DUAL SOUND		
ADJUSTMENT ITEM NUMBER	INITIAL VALUE	ITEM
01	+32	K2
OPTION		
03	0	TUNER PACK
04	0	E11/E12
05	0	DUAL SOUND
06	0	COLOUR
07	0	TEXT
08	0	AV4
09	0	NICAM IC

WHEN CHANGING FLYBACK TRANSFORMER

1. Supply RF signal (programme).
2. Press the Service switch (S2J1) and the button "9" on the remote hand unit within five seconds to turn the adjustment mode on.
3. Press "CM" button to select the VCJ Adjustment Picture.
4. Make sure that the Screen Up/Down Request Bit is "00" on both bright and dark pictures.
   If not so, set it to "00" with the Screen Control on the Flyback Transformer.
   Screen Up/Down Request Bit is :
   - "01" : Turn the Screen Control counterclockwise.
   - "10" : Turn the Screen Control clockwise.



VCJ adjustment picture

PARTS LIST

MODEL : CT – 21A2EST/CT – 21A2EST (Y)
CT – 25A2EST/CT – 25A2EST (Y)

In order to expedite delivery of replacement part orders.

Specify : 1. Model number/Serial number
2. Part number and Description
3. Quantity

Unless full information is supplied, delay in execution of orders will result.

⚠ : Critical components ○ : New Parts

MARK	B	C	D	F	G	J	K
TOLERANCE (%)	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10

MARK	M	N	V	X	Z	P	Q
TOLERANCE (%)	± 20	± 30	+ 10 – 10	+ 40 – 20	+ 80 – 20	+ 100 – 0	+ 30 – 10

MARK	B	C	D	F	G
TOLERANCE (pF)	± 0.1	± 0.25	± 0.5	± 1	± 2

ABBREVIATION

[21E] : CT – 21A2EST
[21Y] : CT – 21A2EST (Y)
[25E] : CT – 25A2EST
[25Y] : CT – 25A2EST (Y)

[21E] : CT – 21A2EST [21Y] : CT – 21A2EST (Y)
[25E] : CT – 25A2EST [25Y] : CT – 25A2EST (Y)

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
		TUBES		
⚠V 271	255P801010	CRT ASSY	A51EAL55X01	[21E, 21Y]
⚠V 271	255P930010	CRT ASSY	A59ECY13X01	[25E, 25Y]
		INTEGRATED CIRCUITS		
IC1A1	272P654010	IC	M51497L	
IC201	272P590010	IC	MC44000	
IC202	272P124010	IC	NJM2209S	
IC251	272P027010	IC	AN5862K	
IC2J1	272P575010	IC	CXA1114P	
IC361	272P459010	IC	TA8200AH/MC13500	
IC3001	263P431010	IC	MC44130P	
IC3002	272P655010	IC	TA7337P	
IC3003	263P066020	IC	TC4066BP	
IC451	272P588020	IC	TDA8178S	
IC551	272P406010	IC	TEA2031A	[25E, 25Y]
IC601	272P591010	IC	MC44140	
IC602	272P170010	IC	TDA4565 CTI	
IC701	263P432020	IC	CXP80424-123S	
IC702	263P434020	IC	X24C04P	
IC704	274P008050	IC	MN1380-T	
IC7704	263P411010	IC	PC883C654P/AC010	[21E, 25E]
IC7705	272P096020	IC	SAA5231	
IC7706	272P095050	IC	SAA5243O/E	
IC7707	263P622020	IC	HM6264ALSP10/12	
IC7708	274P171010	IC	ST24C02A	
IC7709	272P193010	IC	MAB8461P	[21Y, 25Y]
IC901	272P514010	IC	TEA2261	
IC950	272P412010	IC	TEA5170	
IC951	267P076010	IC	SI-3120C	
IC952	267P076030	IC	SI-3050C	
IC954	266P922010	IC	μPC78M05H	
IC955	266P010020	IC	μPC574J-K	
		TRANSISTORS		
Q 102	260P543050	TRANSISTOR	JC501-Q	
Q 1A1	260P543050	TRANSISTOR	JC501-Q	
Q 202	260P543050	TRANSISTOR	JC501-Q	
Q 203	260P635010	TRANSISTOR	2SC3065F/2SC3065G	
Q 204	260P543050	TRANSISTOR	JC501-Q	
Q 205	260P543050	TRANSISTOR	JC501-Q	
Q 251	260P543050	TRANSISTOR	JC501-Q	
Q 252	260P543050	TRANSISTOR	JC501-Q	
Q 253	260P543050	TRANSISTOR	JC501-Q	
Q 254	260P543050	TRANSISTOR	JC501-Q	
Q 255	260P654030	TRANSISTOR	2SC2058S-Q	
Q 2J3	260P543050	TRANSISTOR	JC501-Q	
Q 2J4	260P543050	TRANSISTOR	JC501-Q	
Q 2J5	260P544030	TRANSISTOR	JA101-Q	
Q 2K1	260P543050	TRANSISTOR	JC501-Q	
Q 301	260P387030	TRANSISTOR	2SC2236-Y	
Q 3000	260P543050	TRANSISTOR	JC501-Q	
Q 3001	260P543050	TRANSISTOR	JC501-Q	
Q 3002	260P543050	TRANSISTOR	JC501-Q	
Q 401	260P543030	TRANSISTOR	JC501-R	
Q 402	260P428020	TRANSISTOR	2SC2168-O, Y	
Q 501	260P543030	TRANSISTOR	JC501-R	
Q 551	260P422010	TRANSISTOR	2SC2482	
Q 552	260P606010	TRANSISTOR	2SD1877	[21E, 21Y]
Q 552	260P607010	TRANSISTOR	2SD1878	[25E, 25Y]
Q 553	260P543050	TRANSISTOR	JC501-Q	
Q 554	260P543050	TRANSISTOR	JC501-Q	
Q 651	260P425080	TRANSISTOR	2SC688-L, M, N	
Q 652	260P425080	TRANSISTOR	2SC688-L, M, N	
Q 653	260P425080	TRANSISTOR	2SC688-L, M, N	
Q 654	260P544030	TRANSISTOR	JA101-Q	
Q 655	260P654030	TRANSISTOR	2SC2058S-Q	
Q 656	260P654030	TRANSISTOR	2SC2058S-Q	
Q 657	260P654030	TRANSISTOR	2SC2058S-Q	
Q 658	260P422010	TRANSISTOR	2SC2482	
Q 659	260P422010	TRANSISTOR	2SC2482	
Q 660	260P422010	TRANSISTOR	2SC2482	
Q 661	260P514010	TRANSISTOR	BF423	
Q 662	260P514010	TRANSISTOR	BF423	
Q 663	260P514010	TRANSISTOR	BF423	
Q 665	260P543050	TRANSISTOR	JC501-Q	
Q 666	260P544030	TRANSISTOR	JA101-Q	
Q 6J1	260P543050	TRANSISTOR	JC501-Q	
Q 702	260P543050	TRANSISTOR	JC501-Q	
Q 703	260P543050	TRANSISTOR	JC501-Q	
Q 704	260P543050	TRANSISTOR	JC501-Q	
Q 705	260P543050	TRANSISTOR	JC501-Q	
Q 706	260P635010	TRANSISTOR	2SC3065F/2SC3065G	
Q 707	260P635010	TRANSISTOR	2SC3065F/2SC3065G	
Q 708	260P543050	TRANSISTOR	JC501-Q	
Q 709	260P543050	TRANSISTOR	JC501-Q	
Q 710	260P543050	TRANSISTOR	JC501-Q	
Q 7704	260P654020	TRANSISTOR	2SC2058S-P	
Q 7705	260P543050	TRANSISTOR	JC501-Q	
Q 7707	260P543050	TRANSISTOR	JC501-Q	
Q 7708	260P544030	TRANSISTOR	JA101-Q	
Q 901	260P663010	TRANSISTOR	2SD1887	
Q 902	260P543050	TRANSISTOR	JC501-Q	
Q 903	260P543030	TRANSISTOR	JC501-R	
Q 951	260P255040	TRANSISTOR	2SA950-Y	
Q 952	260P325030	TRANSISTOR	2SC2655-Y	
Q 954	260P668010	TRANSISTOR	2SB1135-R, S	
		DIODES		
D 251	264P370010	DIODE	1N4148	
D 253	264P370010	DIODE	1N4148	
D 254	264P370010	DIODE	1N4148	
D 2J0	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J1	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J4	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J5	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J6	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J7	264P462090	DIODE	EQA02-08A/RD7.5EB3	

[21E] : CT – 21A2EST [21Y] : CT – 21A2EST (Y)
[25E] : CT – 25A2EST [25Y] : CT – 25A2EST (Y)

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
D 2J8	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2J9	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2K1	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2K2	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2K3	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2K5	264P370010	DIODE	1N4148	
D 2K6	264P370010	DIODE	1N4148	
D 2K7	264P370010	DIODE	1N4148	
D 2L0	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 2L1	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 301	264P464010	DIODE	EQA02-10AB/RD10EB2	
D 3000	264P370010	DIODE	1N4148	
D 451	264P374020	DIODE	1N4003ID	
D 551	264P371010	DIODE	BYD33G	
D 554	264P375020	DIODE	BY228	[25E, 25Y]
D 555	264P378010	DIODE	BYW96E	[25E, 25Y]
D 556	264P371010	DIODE	BYD33G	
D 557	264P460060	DIODE	EQA02-05C/RD5.1EB1	
D 558	264P370010	DIODE	1N4148	
D 559	264P370010	DIODE	1N4148	
D 560	264P370010	DIODE	1N4148	[25E, 25Y]
D 562	264P371010	DIODE	BYD33G	
D 563	264P371010	DIODE	BYD33G	
D 564	264P464050	DIODE	EQA02-10C	
D 565	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 601	264P370010	DIODE	1N4148	
D 651	264P370010	DIODE	1N4148	
D 652	264P370010	DIODE	1N4148	
D 653	264P370010	DIODE	1N4148	
D 654	264P371010	DIODE	BYD33G	
D 655	264P370010	DIODE	1N4148	
D 656	264P370010	DIODE	1N4148	
D 657	264P370010	DIODE	1N4148	
D 6J1	264P462090	DIODE	EQA02-08A/RD7.5EB3	
D 702	264P461040	DIODE	EQA02-06A/RD5.6EB2	
D 703	264P370010	DIODE	1N4148	
D 7X1	264P393010	LIGHT EMITTING DIODE	SLC-26VR5F	
D 7X2	264P393020	LIGHT EMITTING DIODE	SLC-26GG5F	
D 7705	264P370010	DIODE	1N4148	
D 7708	264P370010	DIODE	1N4148	
D 7709	264P370010	DIODE	1N4148	
D 7710	264P370010	DIODE	1N4148	
D 7711	264P370010	DIODE	1N4148	[21Y, 25Y]
D 7712	264P370010	DIODE	1N4148	[21Y, 25Y]
D 7713	264P370010	DIODE	1N4148	
D 7714	264P370010	DIODE	1N4148	
D 7715	264P370010	DIODE	1N4148	
D 901	264P376010	DIODE	BYW56	
D 902	264P376010	DIODE	BYW56	
D 903	264P376010	DIODE	BYW56	
D 904	264P376010	DIODE	BYW56	
D 905	264P371010	DIODE	BYD33G	
D 906	264P372010	DIODE	BYV96E	
D 907	264P481050	DIODE	RD3.0FB1	
D 908	264P481050	DIODE	RD3.0FB1	
D 909	264P458090	DIODE	RD4.3EB2	
D 910	264P370010	DIODE	1N4148	
D 911	264P488080	DIODE	RD15FB3	
D 943	264P374020	DIODE	1N4003ID	
D 951	264P358070	DIODE	RU 4AM	
D 952	264P358070	DIODE	RU 4AM	
D 953	264P358070	DIODE	RU 4AM	
D 954	264P358070	DIODE	RU 4AM	
D 955	264P377010	DIODE	BYW95B	
D 958	264P370010	DIODE	1N4148	
D 959	264P370010	DIODE	1N4148	
D 960	264P370010	DIODE	1N4148	
D 961	264P370010	DIODE	1N4148	
D 962	264P370010	DIODE	1N4148	
D 964	264P370010	DIODE	1N4148	
		OTHER SEMICONDUCTORS		
⚠RP901	265P047050	POSITIVE THERMISTOR		
		FILTERS		
CF1A1	299P051050	CERAMIC RESONATOR		
CF3000	299P141020	CERAMIC RESONATOR		
CF3001	296P071020	CERAMIC FILTER		
CF701	299P118040	CERAMIC RESONATOR	4.0MHz	
		COILS		
⚠	409B041040	DEGAUSSING COIL		[21E, 21Y]
⚠	409B041080	DEGAUSSING COIL		[25E, 25Y]
L 101	325C124030	PEAKING COIL	0.22μH-M	
L 201	325C162030	PEAKING COIL	68μH-K	
L 202	325C120090	PEAKING COIL	4.7μH-K	
L 203	325C166030	PEAKING COIL	10μH-J	
L 2J0	325C120010	PEAKING COIL	1μH-M	
L 2J1	325C120010	PEAKING COIL	1μH-M	
L 2J2	325C120010	PEAKING COIL	1μH-M	
L 3J0	325C120070	PEAKING COIL	3.3μH-K	
L 3J1	325C120070	PEAKING COIL	3.3μH-K	
L 3J2	325C120070	PEAKING COIL	3.3μH-K	
L 3J3	325C120070	PEAKING COIL	3.3μH-K	
L 3J4	325C120070	PEAKING COIL	3.3μH-K	
L 3J5	325C120070	PEAKING COIL	3.3μH-K	
L 3J6	325C120070	PEAKING COIL	3.3μH-K	
L 3J7	325C120070	PEAKING COIL	3.3μH-K	
L 3J8	325C120070	PEAKING COIL	3.3μH-K	
L 3J9	325C120070	PEAKING COIL	3.3μH-K	
L 3Y1	325C121030	PEAKING COIL	10μH-K	
L 3Y2	325C121030	PEAKING COIL	10μH-K	
L 3Y3	325C121030	PEAKING COIL	10μH-K	
L 3000	327P074010	SIF COIL	5.5/6.0MHz	
L 3002	325C110010	PEAKING COIL	1μH-K	
L 451	411P001070	FERRITE LEAD		
L 551	321C030010	RF COIL	1μH-K	
L 552	409P408010	PCC COIL		[25E, 25Y]
L 553	409P407010	BRIDGE COIL		[25E, 25Y]
L 554	333P012030	H-LIN. COIL		[21E, 21Y]

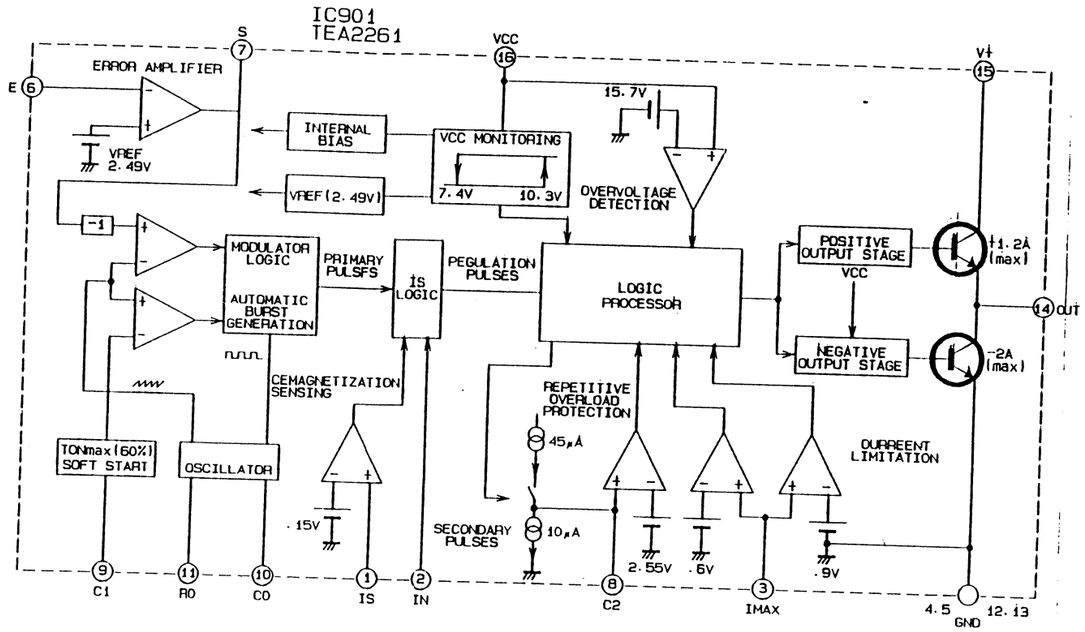
[21E] : CT－21A2EST [21Y] : CT－21A2EST (Y)
[25E] : CT－25A2EST [25Y] : CT－25A2EST (Y)

SYMBOL NO.	PARTS NO.	PARTS NAME	DESCRIPTION	
L 554	333P032010	H-LIN. COIL		[25E, 25Y]
L 555	409P006080	FILTER COIL		
L 556	411D009020	FERRITE CORE FILTER		
L 701	409P699010	OSCILLATOR COIL		
L 702	325C110010	PEAKING COIL	1μH-K	
L 7X1	325C121030	PEAKING COIL	10μH-K	
L 7701	325C121050	PEAKING COIL	15μH-K	
L 7703	321C031040	RF COIL	10μH-K	
L 901	411P001070	FERRITE LEAD		
L 902	411P001070	FERRITE LEAD		
L 903	411P001070	FERRITE LEAD		
L 904	321C030050	RF COIL	2.2μH-K	
L 951	325D059060	PEAKING COIL	390μH-K	
L 953	409P674020	FILTER COIL		
L 991	351P011020	LINE FILTER		
L 992	351P047020	LINE FILTER		
L 994	351P047020	LINE FILTER		
		TRANSFORMERS		
T 551	336P009030	H. DRIVE		
⚠T 552	334P196020	FLYBACK	T3343196-20	[21E, 21Y]
⚠T 552	334P196010	FLYBACK		[25E, 25Y]
⚠T 901	350P510020	POWER	40405231	[21E, 21Y]
⚠T 901	350P510010	POWER		[25E, 25Y]
⚠T 902	336P023010	DRIVE	POWER	
		VARIABLE RESISTORS		
VR951	127C080080	VR-SEMIFIXED	1/5W B10KΩ-M	[21E, 21Y]
		RESISTORS		
⚠R 363	103P398040	FUSE	1/2W 2.2Ω-J	
⚠R 364	103P398040	FUSE	1/2W 2.2Ω-J	
⚠R 3028	103P379010	FUSE	1/4W 8.2Ω-J	
⚠R 553	103P398040	FUSE	1/2W 2.2Ω-J	
R 554	102P243020	CEMENT METAL	5W 3.9KΩ-K/J	[21E, 21Y]
R 554	102P243050	CEMENT METAL	5W 6.8KΩ-K/J	[25E, 25Y]
R 557	102P229010	CEMENT WIRE	10W 8.2KΩ-K/J	
⚠R 558	103P397090	FUSE	1/2W 0.82Ω-J	[25E, 25Y]
⚠R 559	103P397090	FUSE	1/2W 0.82Ω-J	[25E, 25Y]
⚠R 564	103P442020	FUSE METAL	1W 560Ω-K/J	
⚠R 614	103P370010	FUSE	1/4W 10Ω-J	
⚠R 671	103P448050	FUSE METAL	1W 2.7Ω-K/J	[21E, 21Y]
⚠R 671	103P438020	FUSE METAL	2W 1.5Ω-K/J	[25E, 25Y]
⚠R 675	103P372050	FUSE	1/4W 1KΩ-J	
⚠R 676	103P372050	FUSE	1/4W 1KΩ-J	
⚠R 677	103P372050	FUSE	1/4W 1KΩ-J	
R 901	109D075030	CEMENT WIRE	10W 4.7Ω-K	
R 906	109D075050	CEMENT WIRE	10W 820Ω-J	
⚠R 976	103P397090	FUSE	1/2W 0.82Ω-J	
		CAPACITORS AND TRIMMERS		
C 455	189P081050	C-M-PP	200V 0.1μF-J	
C 558	189P071060	C-M-PLASTIC-PP	200V 0.43μF-J	[21E, 21Y]
C 558	189P081040	C-M-PLASTIC-PP	200V 0.68μF-J	[25E, 25Y]
C 559	189P071080	C-M-PLASTIC-PP	200V 0.47μF-J	[25E, 25Y]
C 564	189P081050	C-M-PP	200V 0.1μF-J	
C 904	185D056030	ELECTROLYTIC-C	H400V 220μF-M	
⚠C 910	189P094020	AC CERAMIC	ACT4K E3300pF-M	
VC7701	202P109030	TRIMMER CAPACITOR	5.5pF-30pF	
		SWITCHES		
S 2J1	432P100010	KEY BOARD SWITCH	1-1 H=4.3	
S 7Y3	432P085070	KEY BOARD SWITCH		
⚠S 991	432P076010	PUSH SWITCH	2-1 AC250V 5A L18	
		MISCELLANEOUS		
⚠	449C081010	CRT SOCKET		
⚠F 991	283D047040	FUSE	2A-T	
IP101	295P268020	TUNER HF PACK	WG	
J 2J1	449C102010	SOCKET DIN MINI		
J 2J2	451C058010	CONNECTOR		
J 2J3	451C058010	CONNECTOR		
J 3Y1	451C082040	MICROPHONE JACK		
⚠K 901	287P049030	POWER RELAY		
SP391	480P383060	SPEAKER	C100P03M6960	
SP392	480P383060	SPEAKER	C100P03M6960	
X 601	285P142010	CRYSTAL RESONATOR	17.7MHz	
X 7701	285P062020	CRYSTAL RESONATOR	13.9MHz	
X 7702	285P064020	CRYSTAL RESONATOR	6MHz	
X 7703	285P139010	CRYSTAL RESONATOR	12MHz	[21E, 25E]
X 7704	285P064020	CRYSTAL RESONATOR	6MHz	[21Y, 25Y]
⚠Z 551	299P087060	PROTECTOR		[25E, 25Y]
Z 701	939P226010	PREAMP UNIT	SBX1483	
⚠Z 952	299P087080	PROTECTOR	PRF 3150	
⚠Z 953	299P087080	PROTECTOR	PRF 3150	
⚠Z 956	299P132010	PROTECTOR	PRF 5000	
		PRINTED CIRCUIT BOARD ASSY'S		
⚠	920D358030	AV PCB ASSY		[21E]
⚠	920D358010	AV PCB ASSY		[21Y]
⚠	920D358040	AV PCB ASSY		[25E]
⚠	920D358020	AV PCB ASSY		[25Y]
⚠	920D301030	CONTROL PCB ASSY		[21E]
⚠	920D301040	CONTROL PCB ASSY		[21Y]
⚠	920D320090	CONTROL PCB ASSY		[25E]
⚠	920D320020	CONTROL PCB ASSY		[25Y]
⚠	930C457003	CRT PCB ASSY		[21E, 21Y]
⚠	930C457001	CRT PCB ASSY		[25E, 25Y]
⚠	920A389002	MAIN PCB ASSY		[21E, 21Y]
⚠	920A389001	MAIN PCB ASSY		[25E, 25Y]
⚠	930C458001	SOUND PCB ASSY		
⚠	930C456001	TEXT PCB ASSY		[21E, 25E]
⚠	930C456002	TEXT PCB ASSY		[25Y]
		MECHANICAL PARTS		
	669D220030	SCREW	3X10 46LA005	
	669D221030	SCREW	4X10 46LA005	
	669D221060	SCREW	4X16 46LA005	
	669D221080	SCREW	4X25 46LA005	[25E, 25Y]
	669D212010	SCREW	3X12	

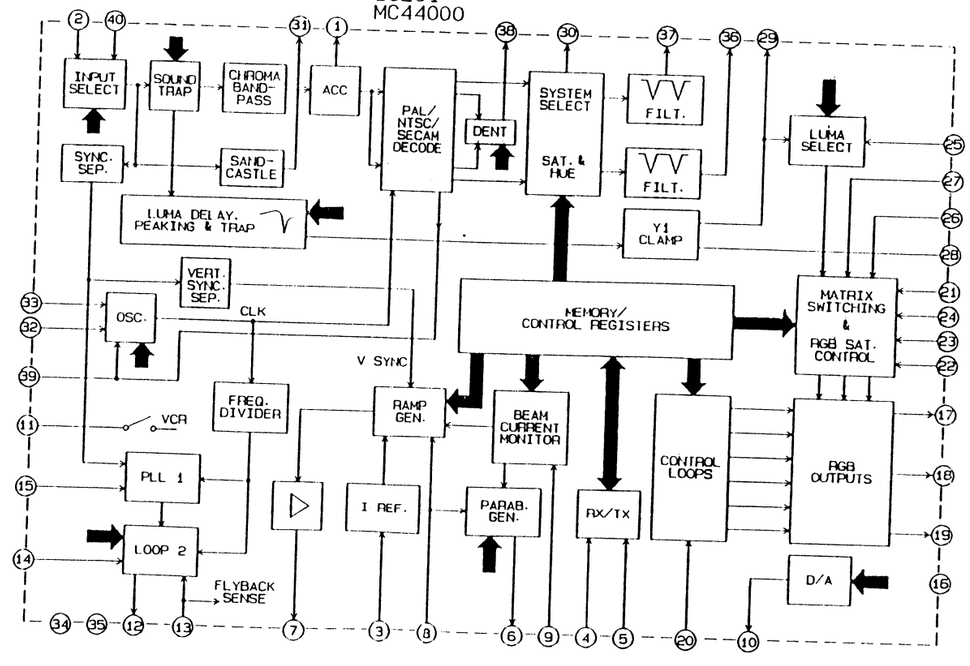
IC BLOCK DIAGRAM

(PCB-MAIN)

IC901
TEA2261

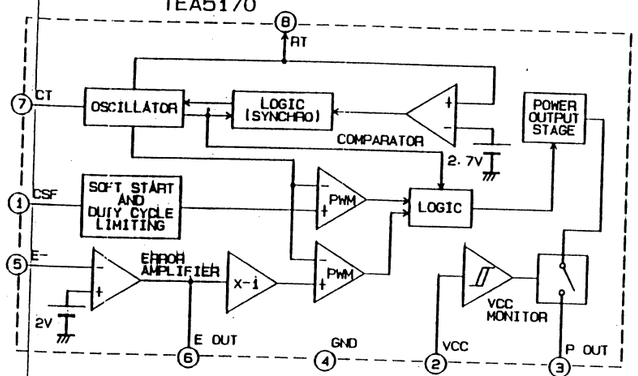


IC201
MC44000

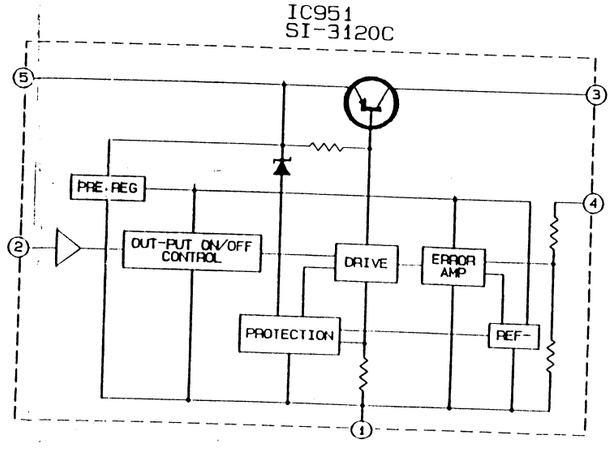


IC601
MC44140

IC950
TEA5170

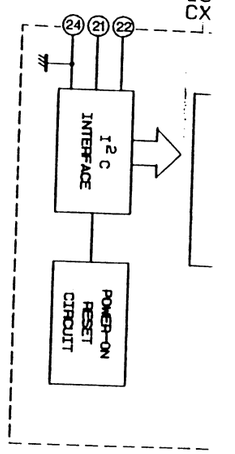


IC951
SI-3120C

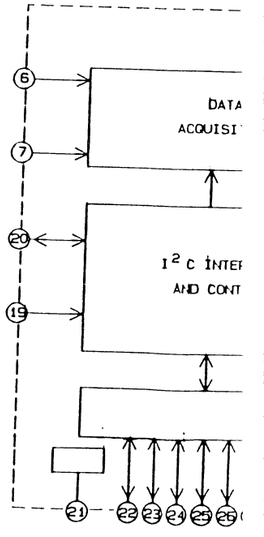


IC952

(PCB-AV

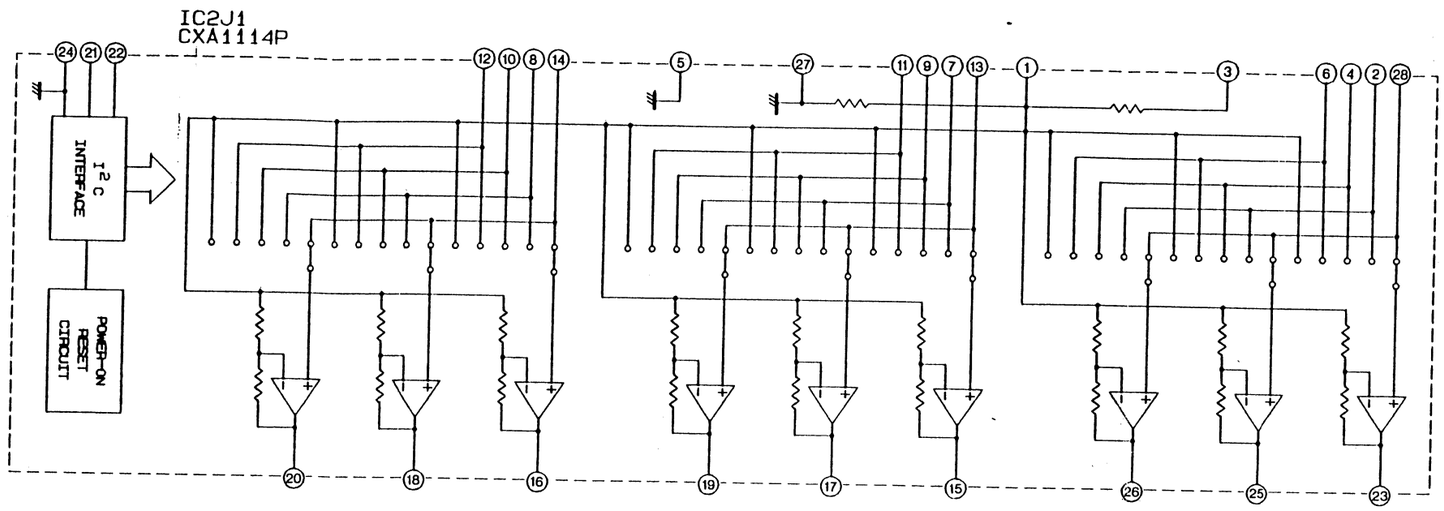


[PCB-SO
PCB-TE



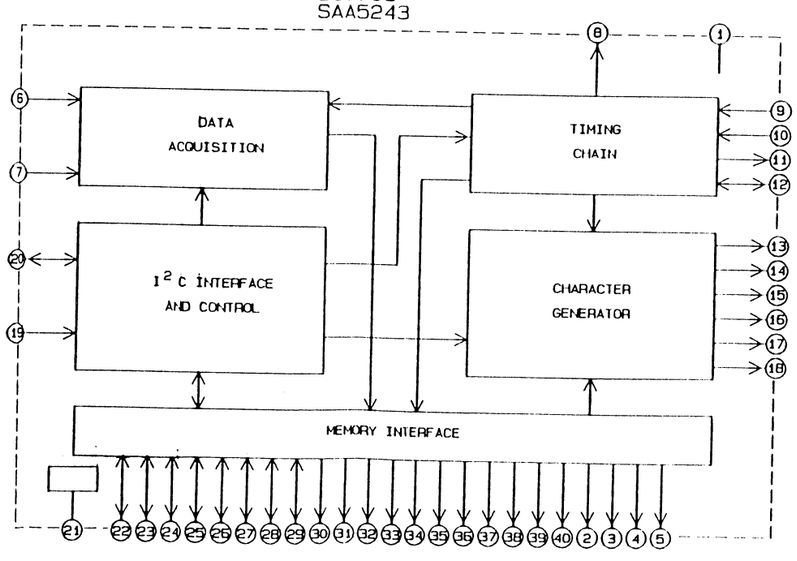
(PCB-AV)

IC2J1
CXA1114P

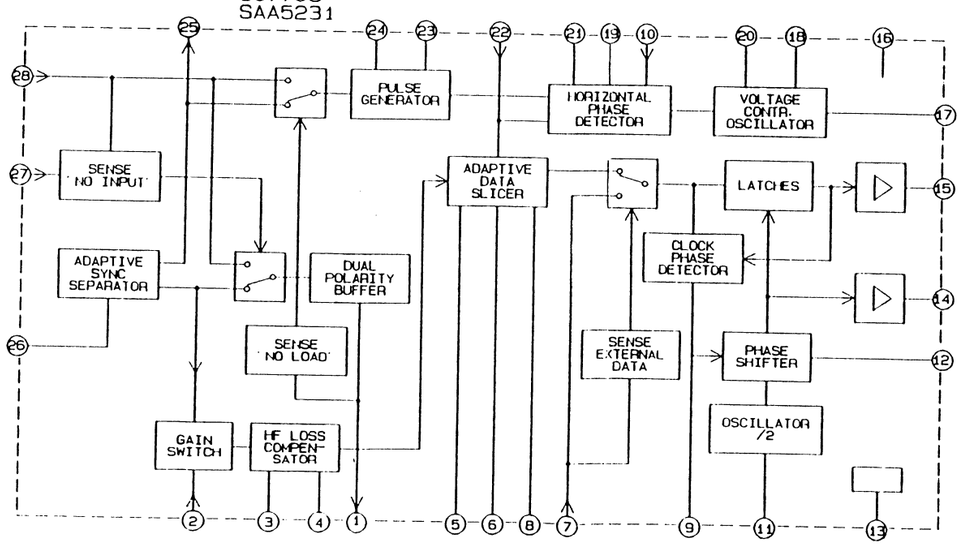


[PCB-SOUND]
[PCB-TEXT]

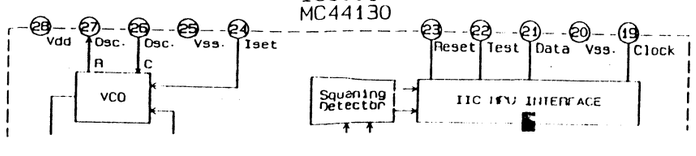
IC7706
SAA5243



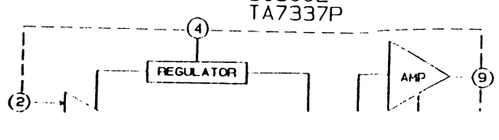
IC7705
SAA5231



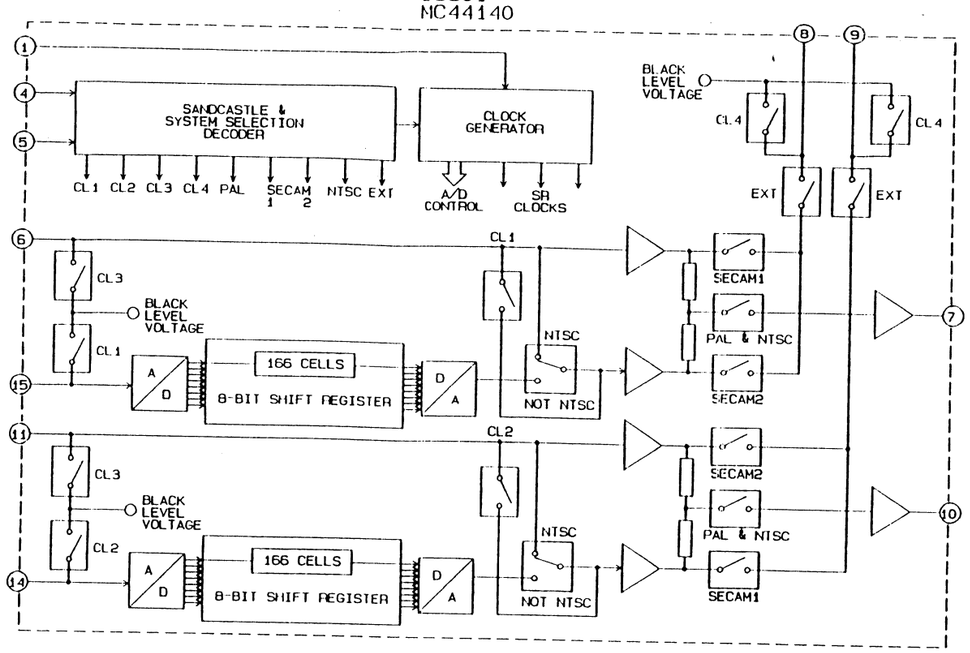
IC3001
MC44130



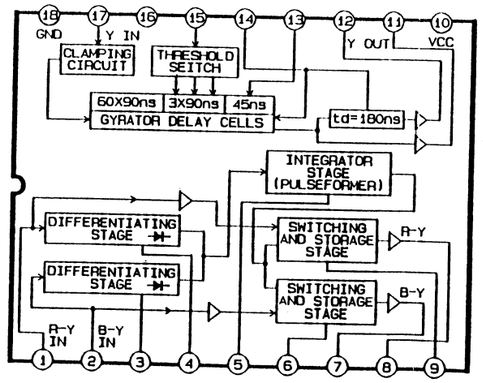
IC3002
TA7337P



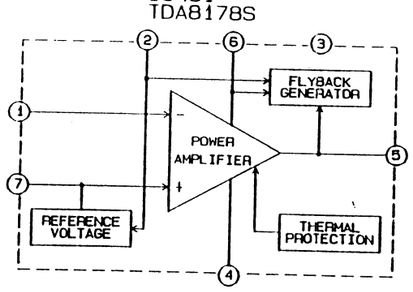
IC601
MC44140



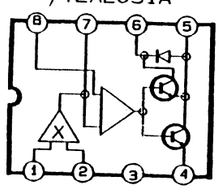
IC602
TDA4565



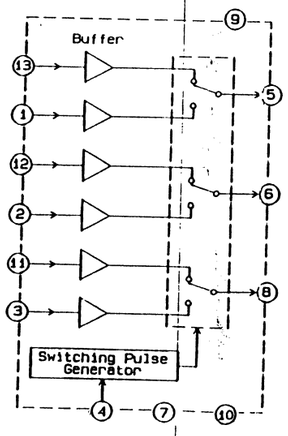
IC451
TDA8178S

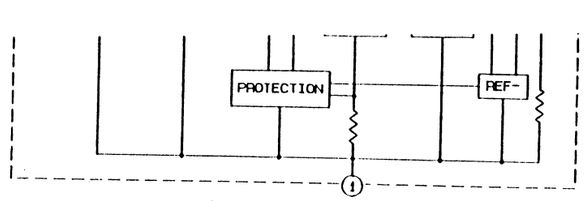


(CT-25A2EST
CT-25A2EST(Y) ONLY)
IC551
TEA2031A

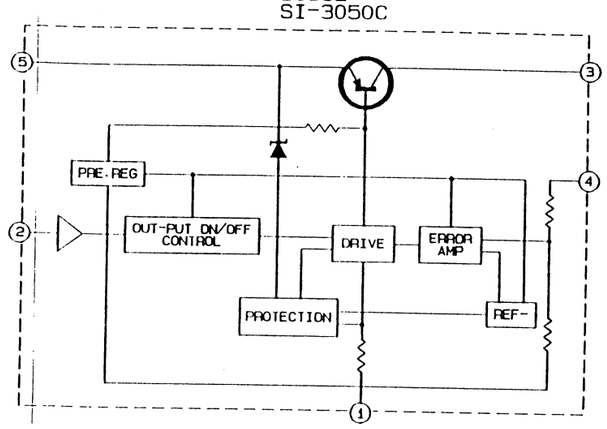


IC251
AN5862K

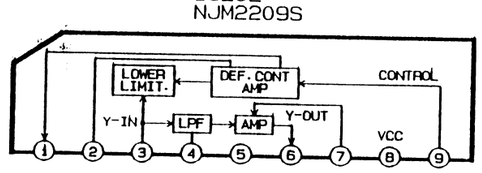




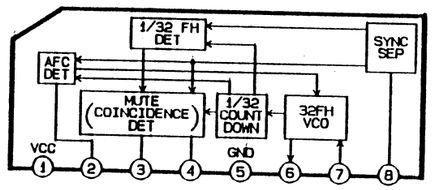
IC952
SI-3050C

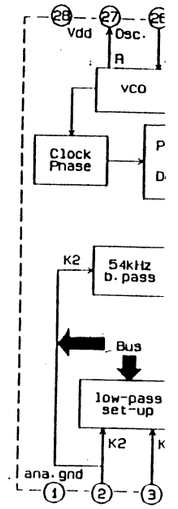


IC202
NJM2209S

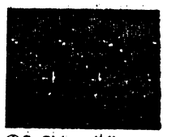


IC1A1
M51497L

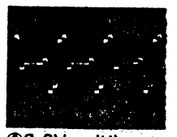




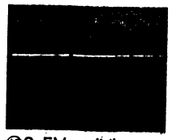
CHASS



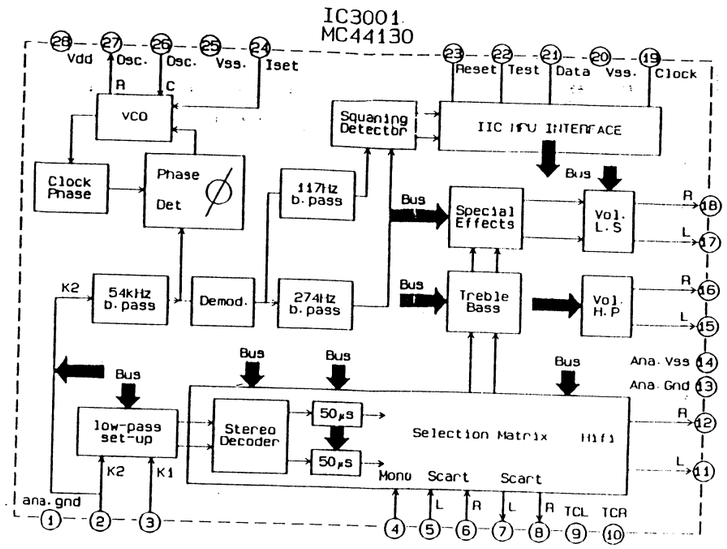
①2.0Vp-p(H)

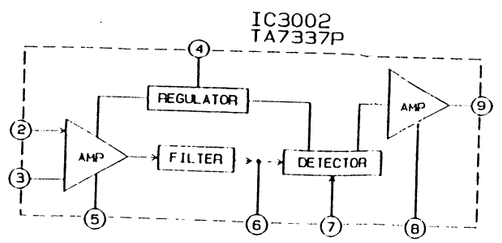


⑨0.8Vp-p(H)

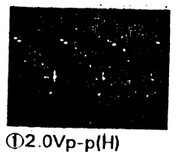


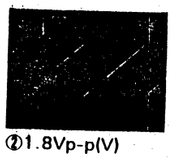
⑰0.5Vp-p(V)

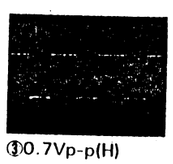


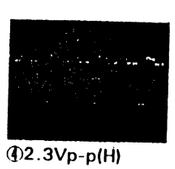


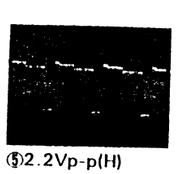
CHASSIS WAVEFORMS

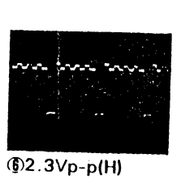

①2.0Vp-p(H)

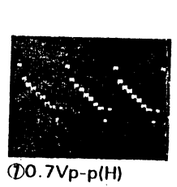

②1.8Vp-p(V)

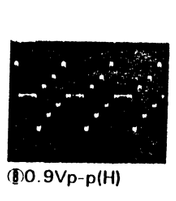

③0.7Vp-p(H)

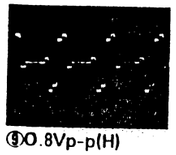

④2.3Vp-p(H)

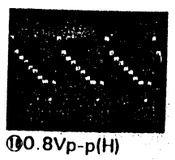

⑤2.2Vp-p(H)

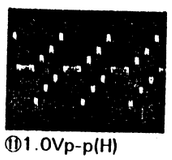

⑥2.3Vp-p(H)

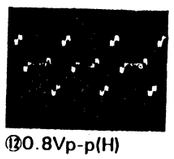

⑦0.7Vp-p(H)

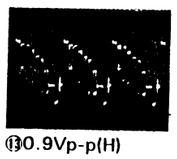

⑧0.9Vp-p(H)

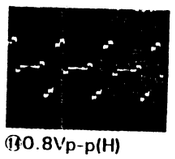

⑨0.8Vp-p(H)

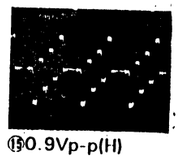

⑩0.8Vp-p(H)

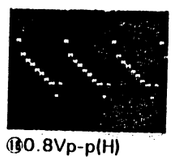

⑪1.0Vp-p(H)

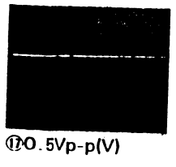

⑫0.8Vp-p(H)

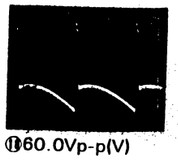

⑬0.9Vp-p(H)

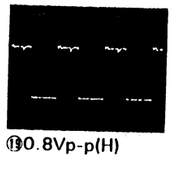

⑭0.8Vp-p(H)

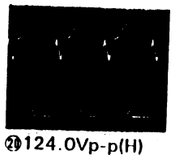

⑮0.9Vp-p(H)

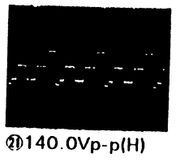

⑯0.8Vp-p(H)

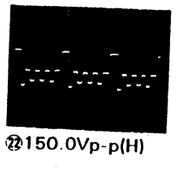

⑰0.5Vp-p(V)

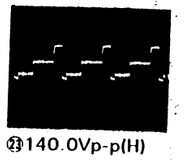

⑱60.0Vp-p(V)

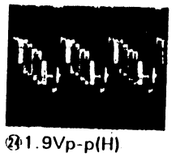

⑲0.8Vp-p(H)


⑳124.0Vp-p(H)


㉑140.0Vp-p(H)

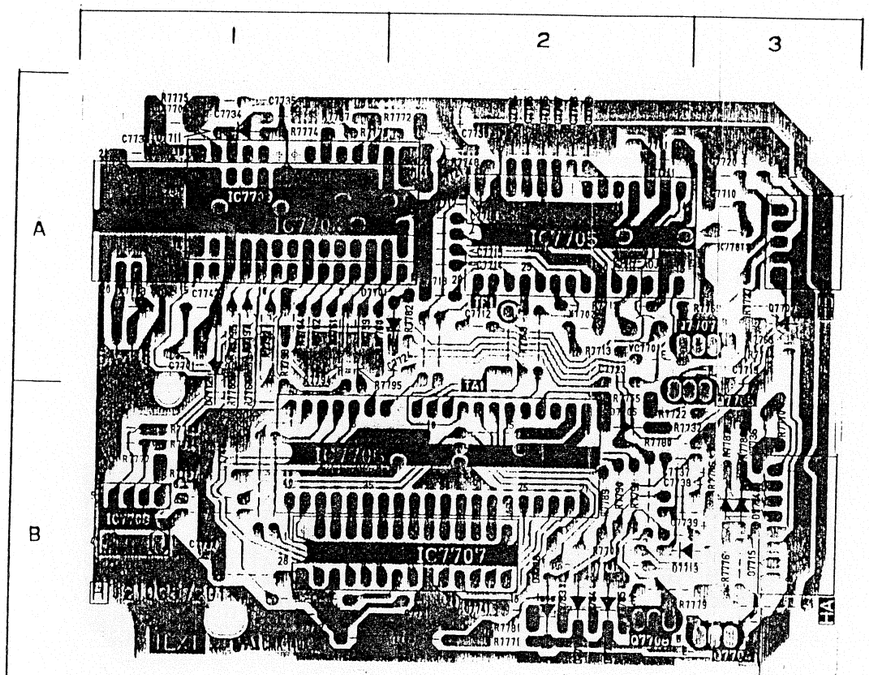

㉒150.0Vp-p(H)


㉓140.0Vp-p(H)

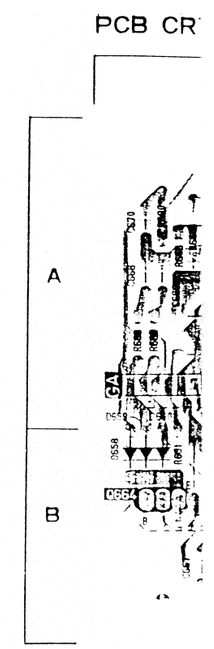

㉔1.9Vp-p(H)

CT-21A2EST
CT-21A2EST(Y)
CT-25A2EST
CT-25A2EST(Y)(3/3)

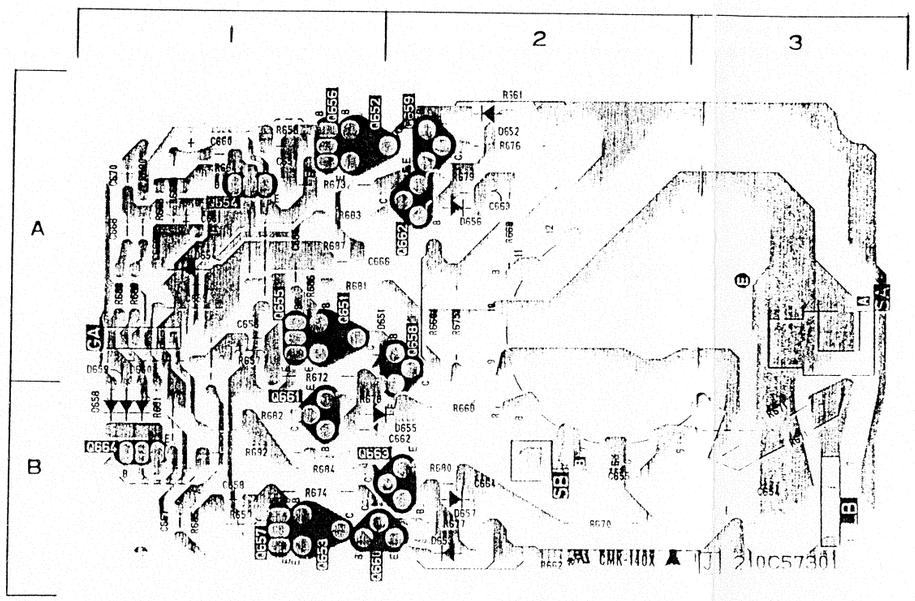
PCB TEXT



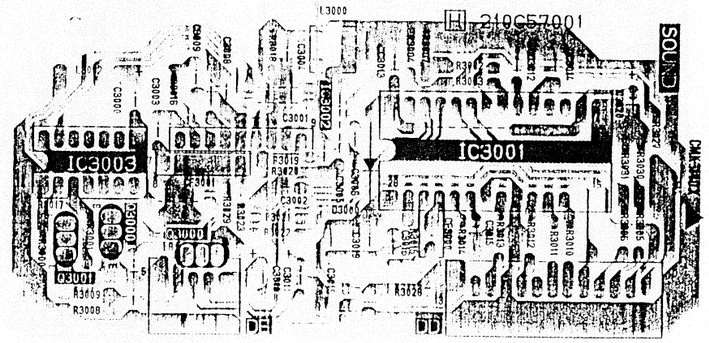
PCB CR



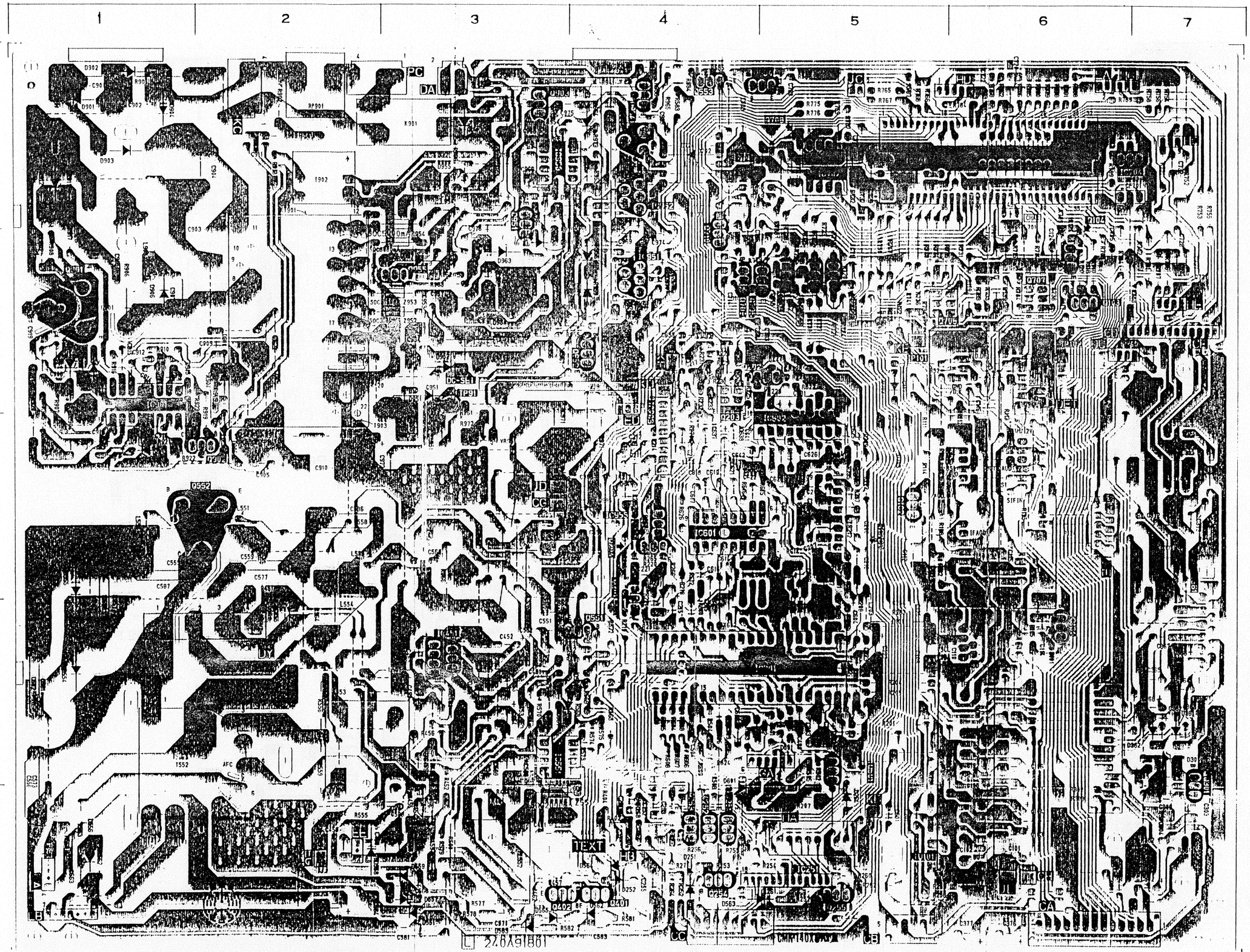
PCB CRT

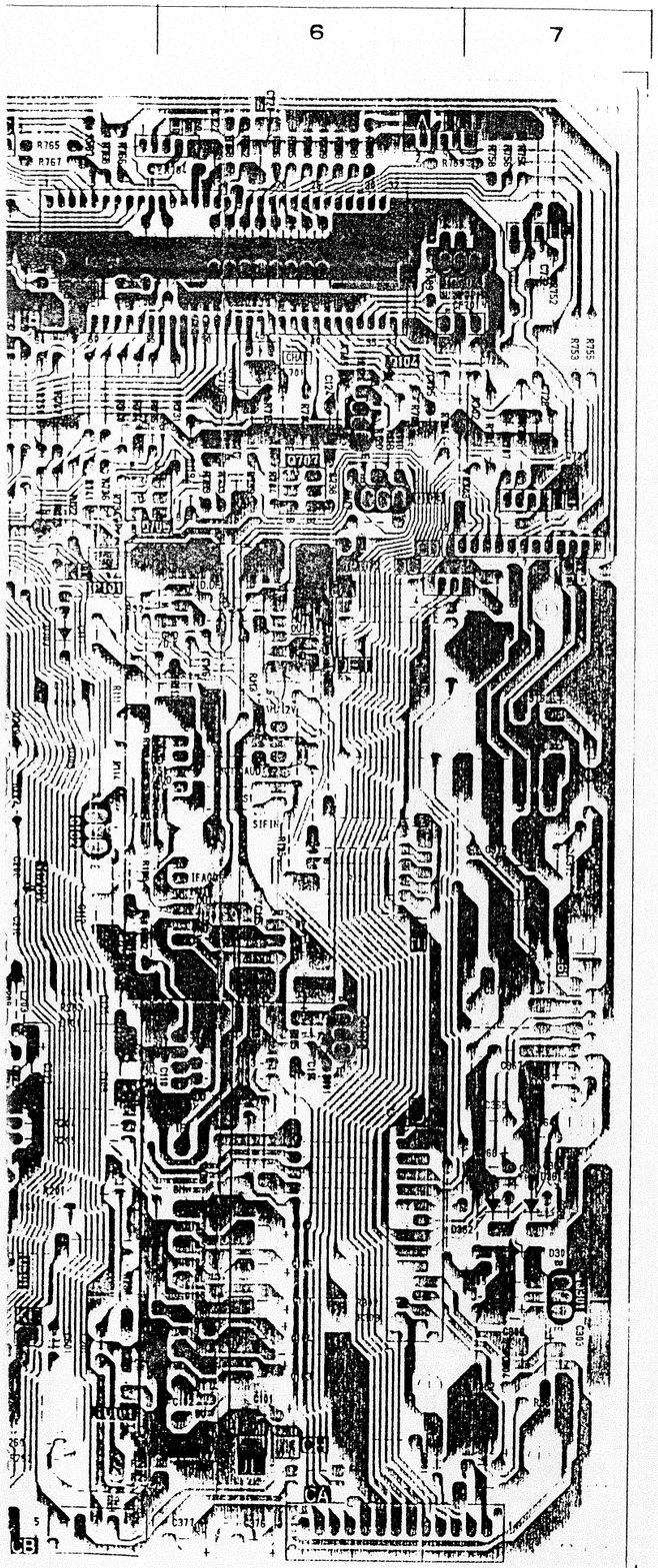


PCB SOUND

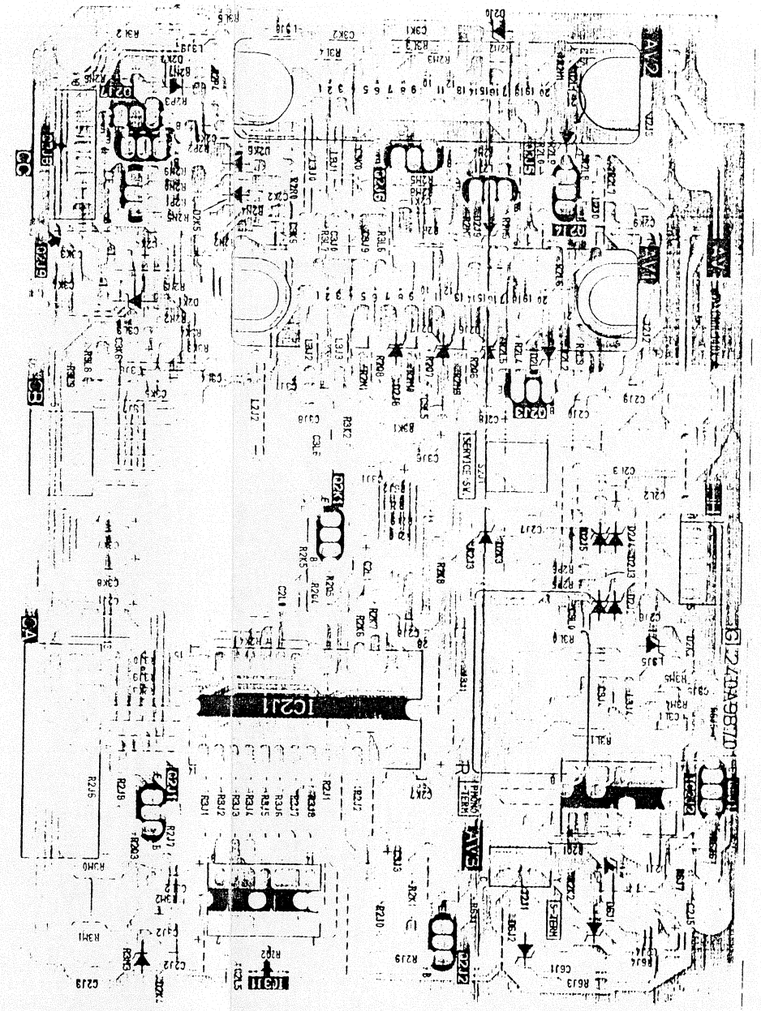


PCB MAIN

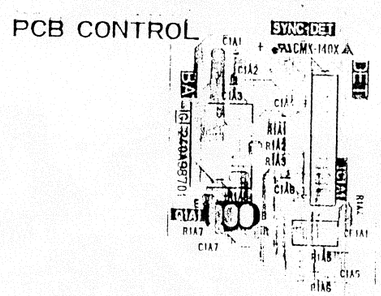




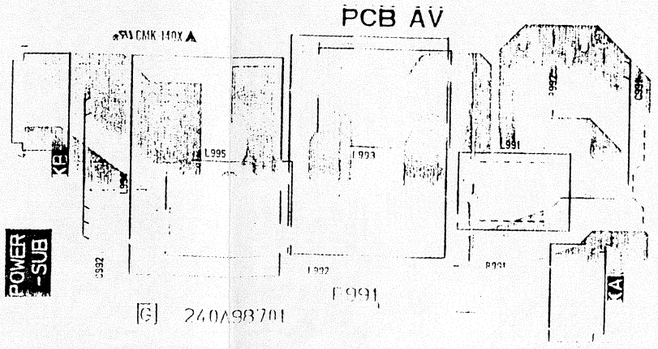
PCB AV



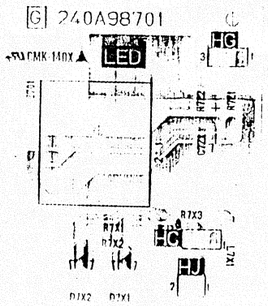
PCB DET



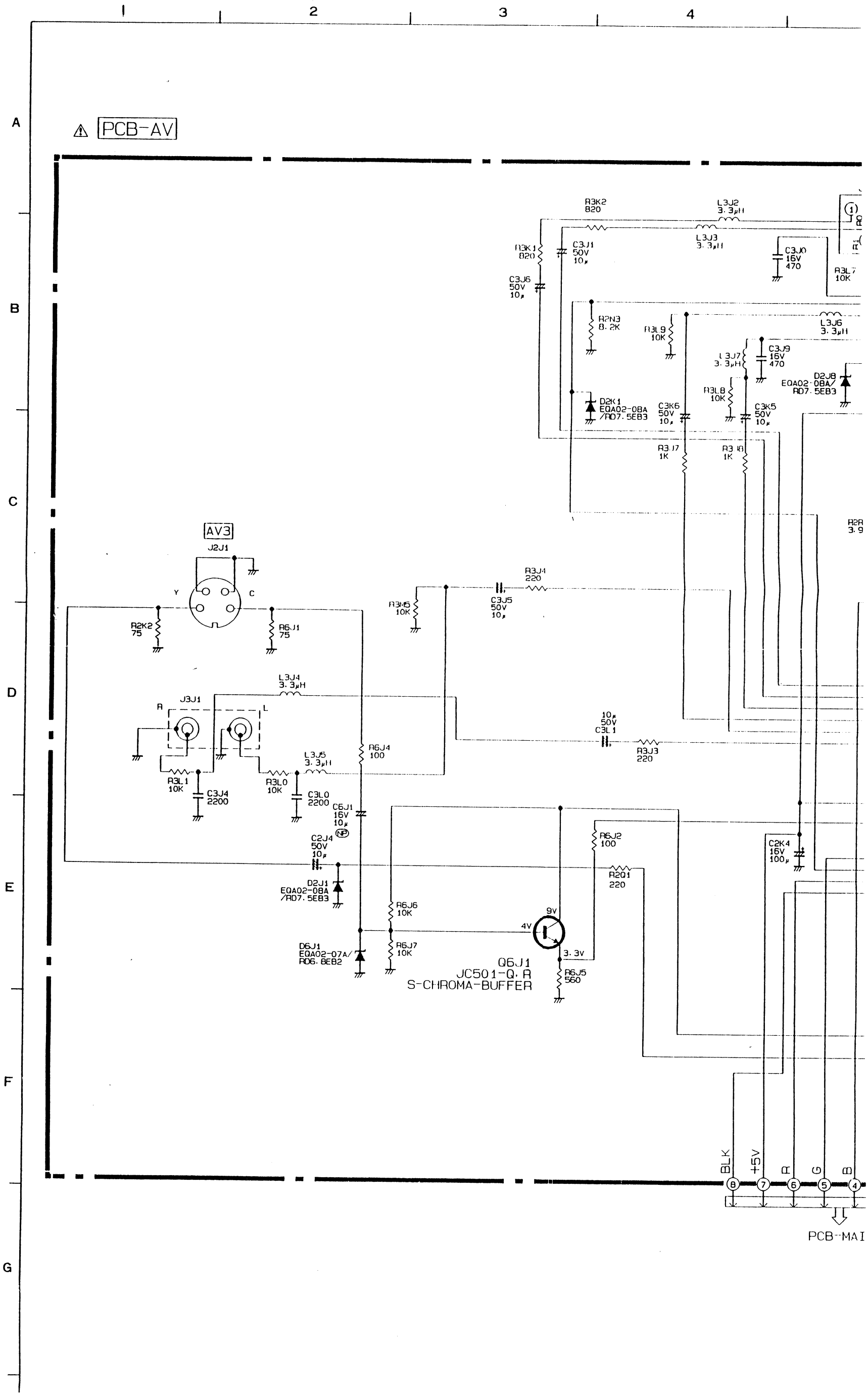
PCB CONTROL



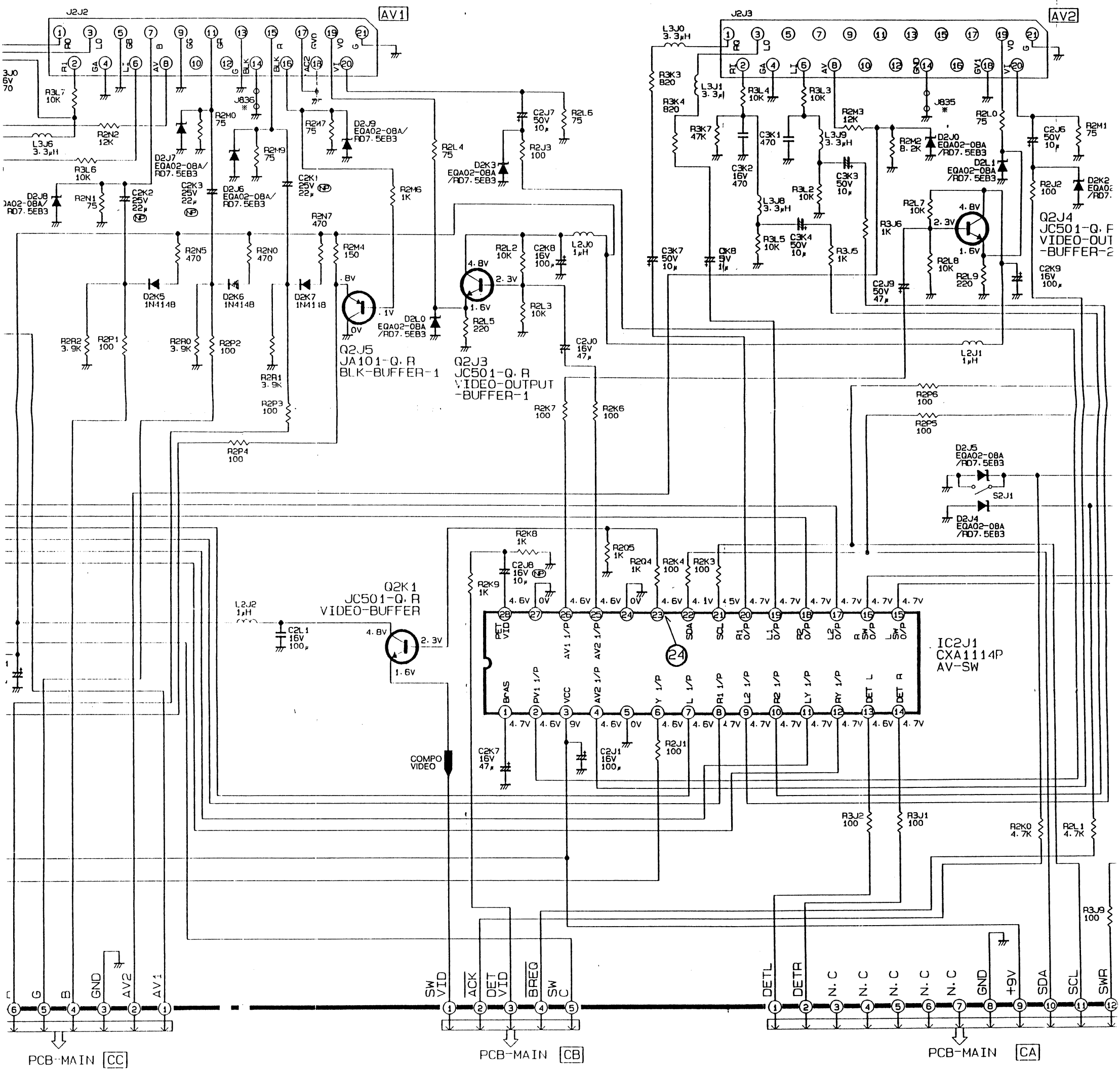
PCB POWER SUB



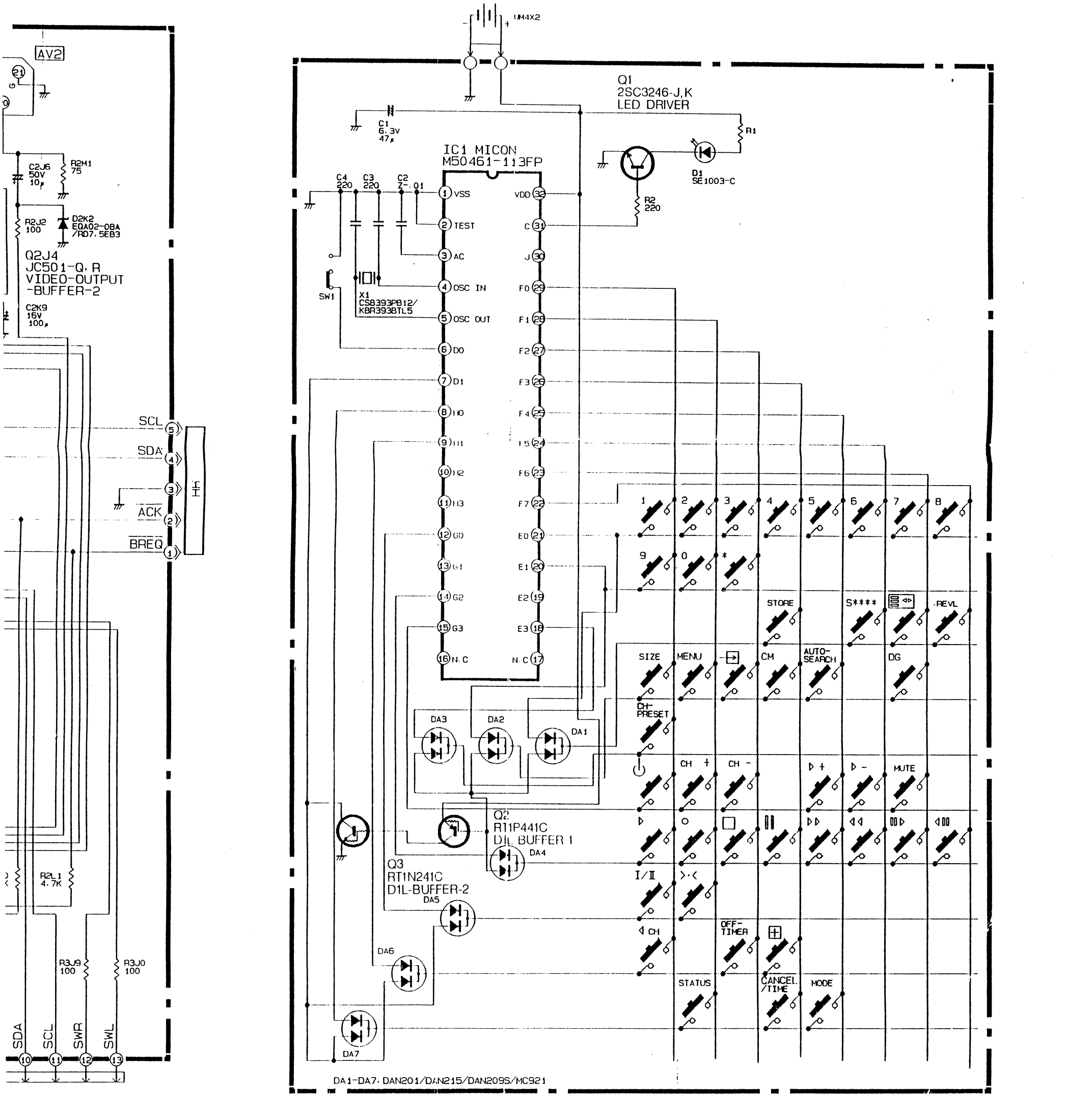
PCB LED


1
2
3
4
A
B
C
D
E
F
G
⚠ PCB-AV
AV3
J2J1
Y
C
R2K2 75
R6J1 75
R3K2 820
L3J2 3.3μH
R3K1 820
C3J1 50V 10μ
L3J3 3.3μH
C3J0 16V 470
C3J6 50V 10μ
R3L7 10K
R2N3 8.2K
R3L9 10K
L3J6 3.3μH
L3J7 3.3μH
C3J9 16V 470
D2J8 EQA02-08A/ RD7.5EB3
D2K1 EQA02-08A /RD7.5EB3
C3K6 50V 10μ
R3L8 10K
C3K5 50V 10μ
R3J7 1K
R3J6 1K
R3J4 220
R3M5 10K
C3J5 50V 10μ
L3J4 3.3μH
J3J1
R
L
R6J4 100
L3J5 3.3μH
R3L1 10K
C3J4 2200
R3L0 10K
C3L0 2200
10μ 50V C3L1
R3J3 220
C6J1 16V 10μ NP
C2J4 50V 10μ
D2J1 EQA02-08A /RD7.5EB3
R6J2 100
C2K4 16V 100μ
R201 220
R6J6 10K
9V
4V
D6J1 EQA02-07A/ RD6.8EB2
R6J7 10K
3.3V
Q6J1
JC501-Q.R
S-CHROMA-BUFFER
R6J5 560
BLK
+5V
R
G
B
8
7
6
5
4
PCB-MAI

MODELS \ PARTS	J835	J836
CT-21A2EST	O	O
CT-21A2EST(Y)	OPEN	OPEN
CT-25A2EST	O	O
CT-25A2EST(Y)	OPEN	OPEN



⚠ TRANSMITTER-REMOCON



SCHEMA

PCB-CONTROL

PCB-LED

PCB-CONTROL HJ

PCB-DET

PCB-SOUN

IC1A1
M51497L
SYNC-DET

Q1A1
JC501Q. A
VIDEO-
BUFFER

Z701
S8X1483-16

D7X2
SLC
-2666RF

D7X1
SLC
-26VRDF

SP392
R-SP

SP391
L-SP

R-OUT

L-OUT

DG

GND
R-IN
GND
L-IN
GND
SP
DIV/OFF
HP
INS

CE
CE

HJ
PCB-LED HJ

HE
HE

JE
JE

JD
JD

HG
HG

HC
HC

BA

SIF(15.74MHZ)
AUDIO IN
12V
NC
SDA
SCL

DE

SIF
AUDIO

TU101
U/V TUNER

IP101
VIF-PACK

FOR ITEM

IC955
μPC574JK
30V REG

Q709
JC501-Q. A
PIC-BLK

COMPO
VIDEO

Q102
JC501-Q. A
SENSE-SW

IC701
CXP80424
MICON

IC702
X24C04P
E²PROM

Q554
JC501-Q. A
POWER-OFF
-SW-2

IC954
μPC78M05
5V REG

(SIF2)
(AUDIO)
(SDA)
(SCL)

(26. 30. 28. 31. 39. 40)
(4. 5. 8. 47. 48. 50)

SCHEMATIC DIAGRAM MODELS : CT-21A2EST
CT-21A2EST(Y)

4 5 6 7 8 9 10 11 12

PCB-CONTROL HJ

PCB-LED

PCB-DET

PCB-SOUND

IC1A1
M51497L
SYNC-DET

Q1A1
JC501Q-A
VIDEO-
BUFFER

Q709
JC501-Q-A
PIC-BLK

IC702
X24C04P
E²PROM

Q554
JC501-Q-A
POWER-OFF
-SW-2

IC954
μPC78M05
5V REG

IC361
TA8200AH AUDI-AMP

IC202
NJM2209S
SHARPNES

IC601
MC44140
DELAY
LINE

IC201
MC44000
VCJ

Q204 Q205
JC501-Q-A JC501-Q-A
PAL/SECAM PAL/SECAM
SW1 SW2

Q202
JC501
VIDEO

D703
1N4148

COMPO
VIDEO

(26.30.28.31.39.40)

11 12 13 14 15 16 17 18

5T
5T(Y)

PCB-AV

PCB-TEXT

PCB-CRT

IC251 AN5862K RGB-SW

Q202 JC501-Q,R VIDEO DRIVE

Q203 2SC3065 -F,G ACL AMP

Q204 JC501-Q,R PAL/SECAM SW1

Q205 JC501-Q,R PAL/SECAM SW2

IC602 TDA4565 CTI

Q253 JC501-Q,R B-ACL

Q251 JC501-Q,R G-ACL

Q252 JC501-Q,R R-ACL

Q254 JC501-Q,R ACL DRIVE

Q301 2SC2236-O,Y AV-REC

Q651 2SC2688-L,M R-OUT-1

Q658 2SC2482 R-OUT-2

Q661 BF423 R-FDBK

Q655 2SC2058S-Q R-AMP

Q255 2SC2058S-Q OSD PRIORITY SW

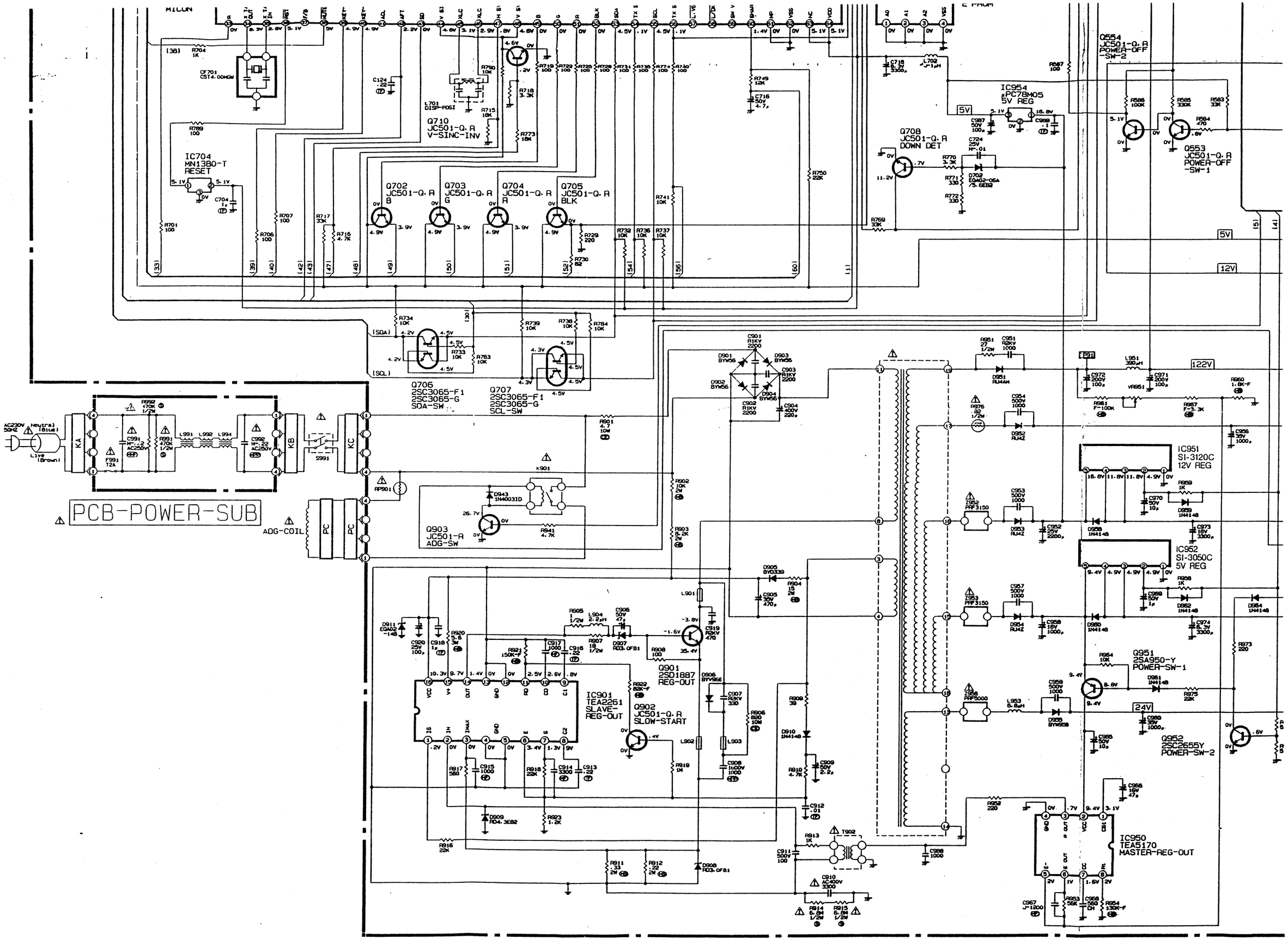
⚠ SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THERFORE REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS. FOR ACCURACY OF THE REPLACEMENT REFER TO THE PARTS LIST OF SERVICE MANUAL.

DON'T DEGRADE THE SAFETY OF THE RECEIVERS THROUGH IMPROPER SERVICING.

NOTE 1:

1. The unit of resistance is "ohm" with no symbol.
   Accordingly, K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, is less than 1/4 watt.
3. Resistors, if not specifically designated, are carbon resistors.
4. The marks of resistors are as follows:


MICON
E PROM
IC704
MN1380-T
RESET
Q710
JC501-Q.A
V-SINC-INV
Q702
JC501-Q.A
B
Q703
JC501-Q.A
G
Q704
JC501-Q.A
R
Q705
JC501-Q.A
BLK
Q706
2SC3065-F1
2SC3065-G
SDA-SW
Q707
2SC3065-F1
2SC3065-G
SCL-SW
Q708
JC501-Q.A
DOWN DET
IC954
μPC78M05
5V REG
Q554
JC501-Q.A
POWER-OFF
-SW-2
Q553
JC501-Q.A
POWER-OFF
-SW-1
5V
12V
122V
24V
IC951
SI-3120C
12V REG
IC952
SI-3050C
5V REG
Q951
2SA950-Y
POWER-SW-1
Q952
2SC2655Y
POWER-SW-2
IC950
TEA5170
MASTER-REG-OUT
IC901
TEA2261
SLAVE-
REG-OUT
Q902
JC501-Q.A
SLOW-START
Q901
2SD1887
REG-OUT
Q903
JC501-A
ADG-SW
AC230V 50HZ
Neutral (Blue)
Live (Brown)
PCB-POWER-SUB
ADG-COIL

IC954
μPC78M05
5V REG

Q708
JC501-Q.A
DOWN DET

Q554
JC501-Q.A
POWER-OFF
-SW-2

Q553
JC501-Q.A
POWER-OFF
-SW-1

IC201
MC44000
VCJ

Q253
JC501-Q.A
B-ACL

Q251
JC501-Q.A
G-ACL

Q252
JC501-Q.A
R-ACL

Q254
JC501-Q.A
ACL DRIVE

Q501
JC501-R
H-DRIVE-OUT

IC451
TDA8178S
V-OUT

Q401
JC501-R
V-POS-2

Q402
2SC2166-OY
V-POS-1

IC951
SI-3120C
12V REG

IC952
SI-3050C
5V REG

Q951
2SA950-Y
POWER-SW-1

Q952
2SC2655Y
POWER-SW-2

IC950
TEA5170
MASTER-REG-OUT

Q954
2SB1135-A,S
SOUND-SW-1

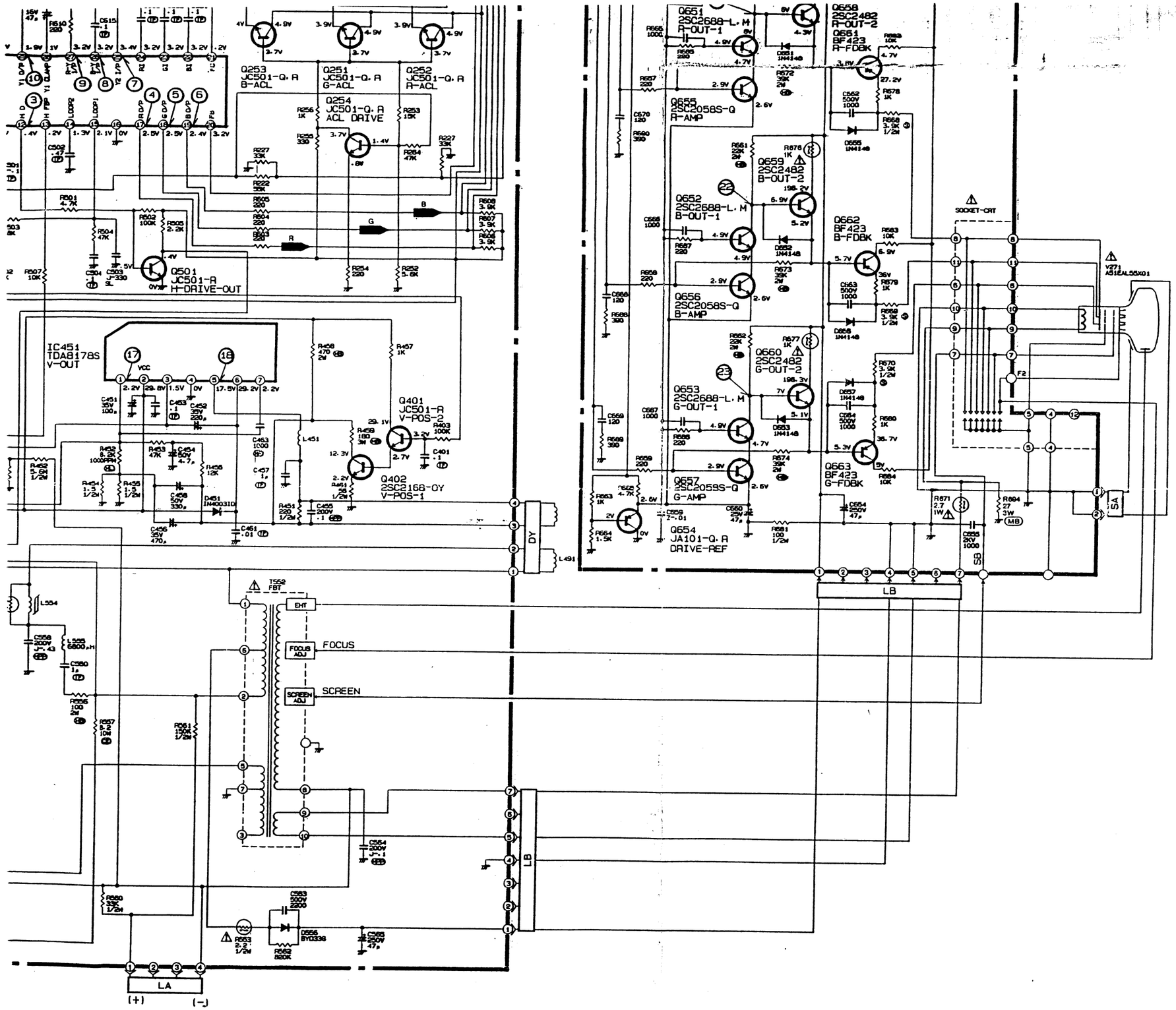
Q552
2SD1877
H-OUT

Q551
2SC2482
H-DRIVE

5V
12V
24V
28V
122V

PB-MAIN

FBT
EHT
FOCUS
FOCUS ADJ
SCREEN
SCREEN ADJ
DY
LB
LA
(+)
(-)



NOTE 1:

1. The unit of resistance is "ohm" with no symbol.
   Accordingly. K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, is less than 1/4 watt.
3. Resistors, if not specifically designated, are carbon resistors.
4. The marks of resistors are as follows:
   - (CE) : Cemented resistor
   - (MB) : Metal oxide film resistor (type B)
   - (MPC) : Metel plate cement resistor.
   - (ML) : Metal linear resistor.
   - (S) : Fixed composition resistor
   - (W) : Wire wound resistor
   - (M) : Metal film resistor
5. The tolerance of resistor value, if not specifically designated, is: ±5%, K = ±10% M = ±20%
6. The unit of capacitance, if not specifically designated, is;
   a) μF. for numbers less than 1
   b) PF. for numbers more than 1
7. Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors.
8. The marks of capacitors are as follows:
   - (ALM) : Aluminus electrolytic capacitor
   - (MF) : Polyester capacitor
   - (PP) : Polypropylene film capacitor
   - (TANT) : Tantalum capacitor
   - (TF) : Twin film capacitor.
   - (MF.PP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - (PS) : Styrol capacitor.
   - (SC) : Semi conductor capacitor.
   - ⫩ : Electrolytic capacitor
9. The DC working voltage of capacitor, if not specifically designated is: 50V
10. The tolerance of capacitor value, if not specifically designated is:
    ±10% for polyester capacitor
    ±5% for ceramic capacitor
    and J = ±5% K = ±10% M = ±20% P = $^{+100\%}_{0\%}$
    C = ±0.25PF D = ±0.5PF F = ±1PF Z = $^{+80\%}_{-20\%}$ N = ±30%

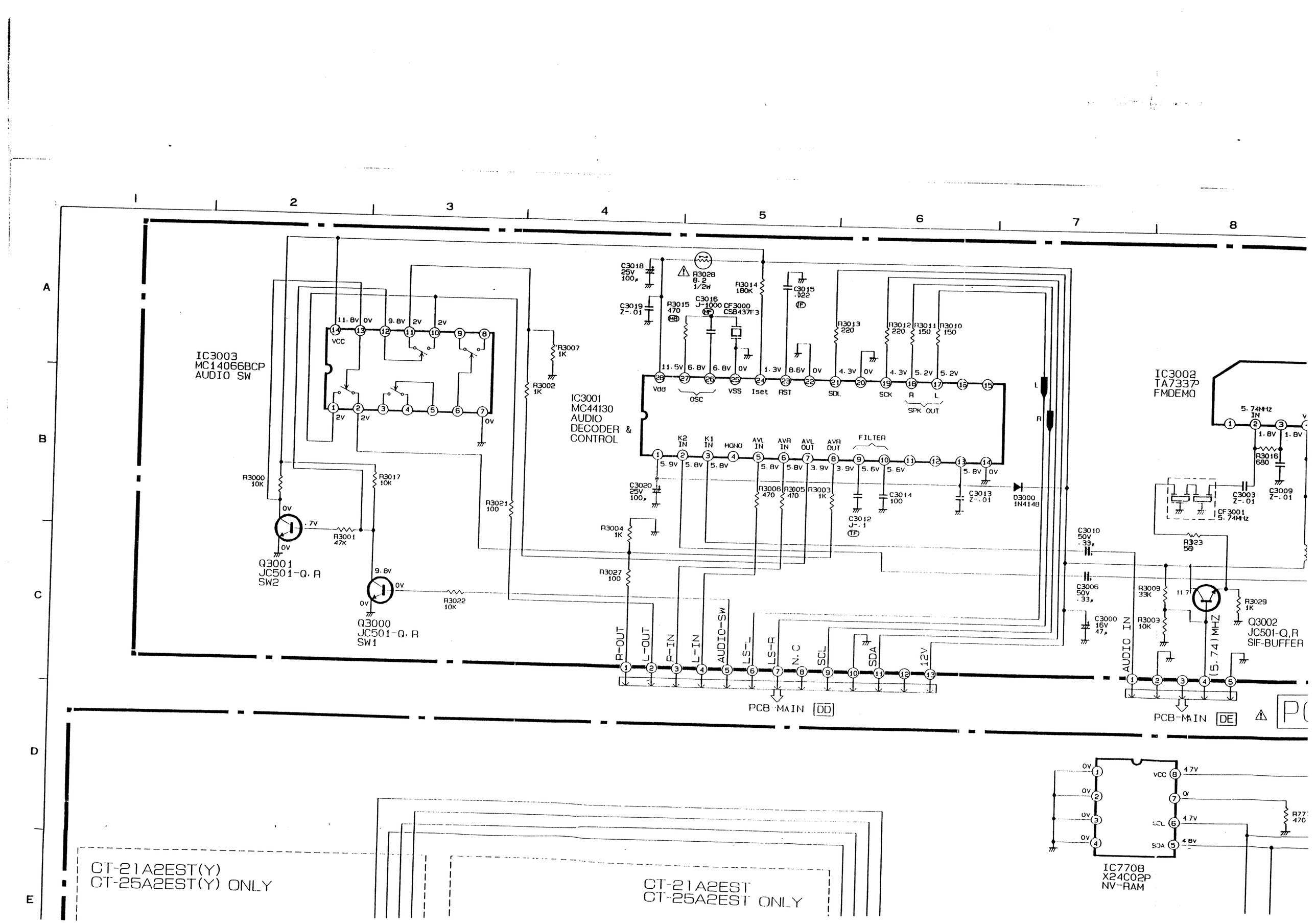
SPECIFIC SYMBOL

Zener Diode	Varistor
Varicap	Crystal unit
Posistor	Air Gap
Thermistor	Part (resistor) attached on the copper-foil side of PCB
Fusible Resistor	Caramic filter

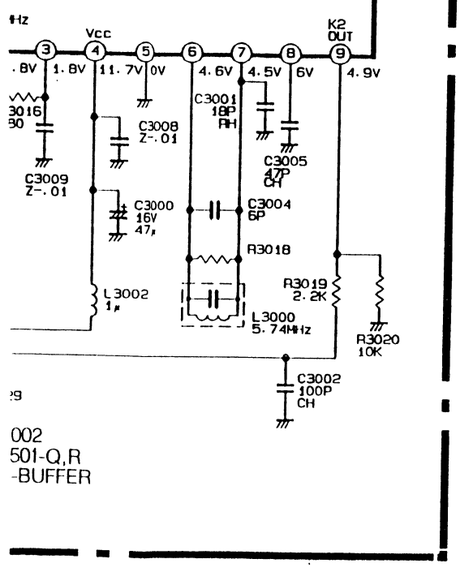
NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. Waveforms were taken with offset PAL colour bar signal.
3. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

CT-21A2EST
CT-21A2EST(Y)
CT-25A2EST
CT-25A2EST(Y)(1/3)

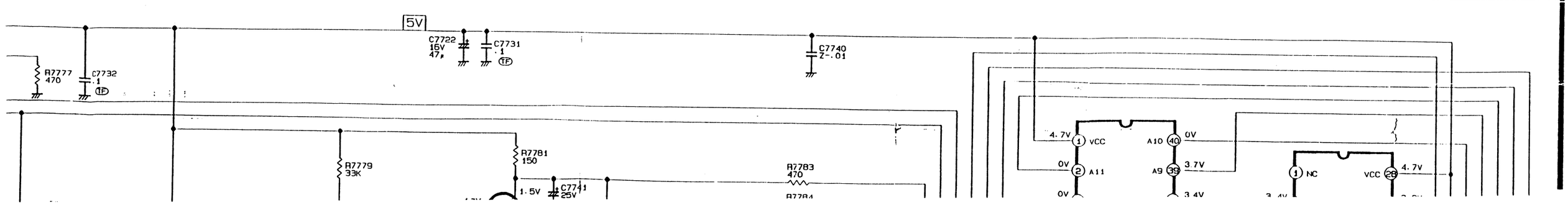

IC3003
MC14066BCP
AUDIO SW
IC3001
MC44130
AUDIO
DECODER &
CONTROL
IC3002
TA7337P
FMDEMO
Q3001
JC501-Q.R
SW2
Q3000
JC501-Q.R
SW1
Q3002
JC501-Q,R
SIF-BUFFER
D3000
1N4148
IC7708
X24C02P
NV-RAM
VCC
Vdd
OSC
VSS
Iset
RST
SDL
SCK
SPK OUT
FILTER
MONO
R-OUT
L-OUT
R-IN
L-IN
AUDIO-SW
LS-L
LS-R
N.C
SCL
SDA
12V
AUDIO IN
5.74MHz IN
(5.74)MHZ
PCB MAIN DD
PCB MAIN DE
CT-21A2EST(Y)
CT-25A2EST(Y) ONLY
CT-21A2EST
CT-25A2EST ONLY

9 10 11 12 13 14 15 16



002
501-Q,R
-BUFFER

PCB-SOUND



R7777 470
C7732 .1 (TF)
C7722 16V 47μ
C7731 .1 (TF)
C7740 Z-.01
R7779 33K
R7780 3.9K
R7781 150
4.7V
1.5V
0V
C7741 25V 100μ
Q7708 JA101-Q.R ACL-CONT
R7783 470
R7784 470
R7785 470
FOR PRINTER INTERFACE TA1
FOR PRINTER INTERFACE TA2
L7703 10μ
TA4
Q7707 JC501-Q.R VIDEO-BUFFER -TEXT
1V
1.6V
11.7V
R7768 10K
R7776 1.5K
D7713 1N4148
D7714 1N4148
D7715 1N4148
C7737 16V 10μ
C7738 16V 10μ
C7739 16V 10μ
D7710 1N4148
D7709 1N4148
D7708 1N4148
R7786 39K
R7787 39K
R7788 39K
R7789 680
R7790 680
R7791 680
4.7V (1) VCC
0V (2) A11
0V (3) A12
2.4V (4) OE
3.8V (5) WE
.7V (6) TTD
4.4V (7) TTC
(8) HOK
6.8V (9) F6
.6V (10) VCS
1.7V (11) SAND
8.5V (12) TCS
.1V (13) R
.1V (14) G
.1V (15) B
(16) COR
.1V (17) BLAN
(18) Y
4.8V (19) SCL
4.8V (20) SDA
A10 (40) 0V
A9 (39) 3.7V
A8 (38) 3.4V
A7 (37) .1V
A6 (36) .2V
A5 (35) 3.8V
A4 (34) 1.3V
A3 (33) .5V
A2 (32) 2.7V
A1 (31) 2.7V
A0 (30) 2.7V
D7 (29) 0V
D6 (28) 0V
D5 (27) 1.6V
D4 (26) 0V
D3 (25) 1.9V
D2 (24) 1.8V
D1 (23) 2V
D0 (22) .2V
GND (21) 0V
FOR PRINTER INTERFACE
IC7706 SAA 5243 CCT
(1) NC
3.4V (2) A8
.1V (3) A7
.2V (4) A6
3.8V (5) A5
1.3V (6) A4
.5V (7) A3
2.7V (8) A2
2.7V (9) A1
2.7V (10) A0
0V (11) D7
0V (12) D6
1.6V (13) D5
0V (14) GND
VCC (28) 4.7V
WE (27) 3.8V
VCC (26) 4.7V
A11 (25) 0V
A12 (24) 0V
A10 (23) 0V
OE (22) 2.4V
A9 (21) 3.7V
CS (20) 0V
D4 (19) 0V
D0 (18) .2V
D3 (17) 1.9V
D2 (16) 1.8V
D1 (15) 2V
IC7707 HM6264ALSP10 /HM6264ALSP12 8K8 STATIC-RAM
R7701 220
R7703 220
R7722 5.6K
11.8V
.9V
.2V
R7727 82
Q7705 JC501-Q.R BLK-OUT
R7755 330
D7705 1N4148
R7732 2.2K
R7744 220
R7771 4.7K
R7770 10K
C7736 150P
4.8V
0V
Q7704 2SC2058S-N O.S.D-BLK
BLK
5V
12V
PCB-MAIN HB
SCA
SCL
VID
R
G
B
OSD-BLK
PCB-MAIN

CT-21A2EST(Y)
CT-25A2EST(Y) ONLY

CT-21A2EST
CT-25A2EST ONLY

IC7708
X24C02P
NV-RAM

D7701
1N4148

R7781
10K

R7733
5.6K

R7734
5.6K

IC7709
MAB 8461P-W115
MICROCOMPUTER

D7712
1N4148

D7711
1N4148

X7704
6MHz

C7734
J-22 CH

C7733
J-22
CH

R7775
1M

C7735
50V
1μ

R7773
10K

R7767
10K

R7774
470

C7730
16V
33μ

C7721
.1
TF

IC7704
PCB83C654P
/AC010
MICROCOMPUTER

R7759
470

R7764
470

C7701
50V
2.2μ

R7766
10K

R7765
10K

X7703
12MHz

C7702
J-22
CH

C7703
J-22
CH

IC7705
SAA5231
VIP2

R7748
1.2K

C7704
J-15
SL

C7705
K-1000
B

C7706
K-470
B

C7707
Z-.022
B

C7708
K-270
B

C7709
J-100
SL

C7710
J-15
CH

X7701
13.875MHz

C7711
J-27
SL

L7701
15μ

C7727
.1
TF

C7713
K-.068
TF

C7712
50V
2.2μ
NP

R7769
470

R7749
5.6K

C7714
J-220
SL

C7724
J-100
SL

R7712
68K

C7715
25V
K-.047 SR

C7717
25V
K-.047
SR

X7702
6MHz

C7716
J-18
CH

R7713
330

VC7701
5.5-30

C7723
Z-.01

C7720
16V
47μ

C7719
Z-.022

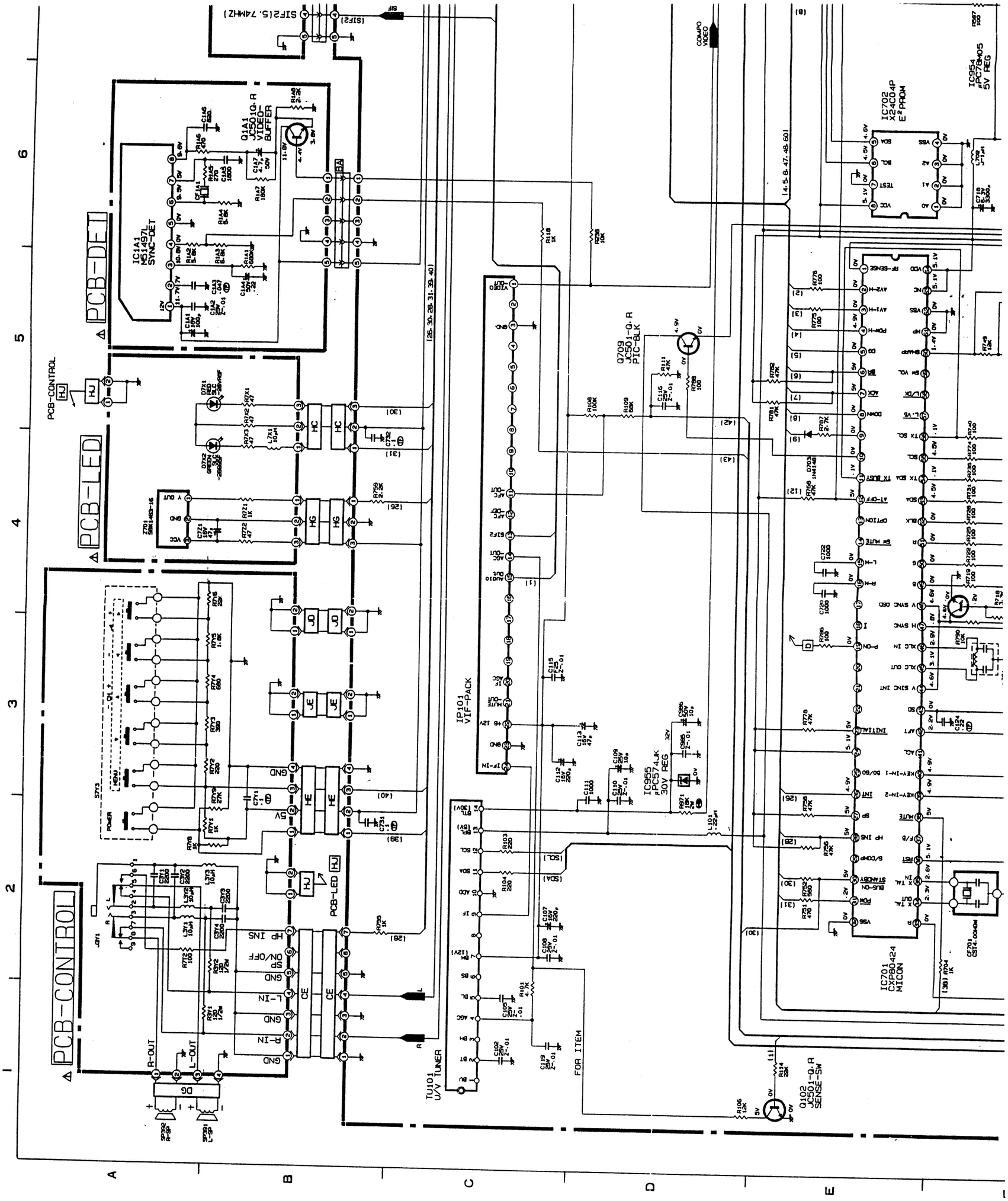
P-ON

BLK

5V

PCB-MAIN

⚠ PCB-TEXT


PCB-DEI
PCB-LED
PCB-CONTROL
IC1A1 MS1497L SYNC-DET
Q1A1 JC501Q-R VIDEO-BUFFER
SIF2(5.74MHZ)
COMPO VIDEO
IC702 X24C04P E²PROM
IC954 μPC78M05 5V REG
Q709 JC501-Q-R PIC-BLK
IP101 VIF-PACK
IC955 μPC574JK 30V REG
TU101 U/V TUNER
Q102 JC501-Q-R SENSE-SW
IC701 CXP80424 MICON
R-OUT
L-OUT
HP INS
SP ON/OFF
GND
L-IN
R-IN
5V
FOR ITEM

SCHEMATIC DIAGRAM MODELS : CT-25A2EST
CT-25A2EST(Y)

4 5 6 7 8 9 10 11

PCB-CONTROL
HJ

PCB-LED

PCB-DET

PCB-SOUND

Z701
S8X1463-16

IC1A1
M51497L
SYNC-DET

Q1A1
JC5010-A
VIDEO-
BUFFER

D7X2 GREEN 3.1C -2868GF
D7X1 RED 3.1C -2874VRDF

L7X1 10μH

JD HG HC BA DE DD KD KE CC

SIF(5.74MHZ) Audio IN 12V NC SDA SCL LS-R LS-L Audio SW L-IN R-IN L-OUT R-OUT

(SIF2) SIF (Audio) AUDIO (SDA) (SCL) (33)

(25.30.28.31.39.40)

Audio Out AFC OUT AFC OUT SIF2 AFC OUT AFC OUT GND VIDEO OUT

(1)

R118 1K
R238 10K

R108 100K
R109 68K

Q709
JC501-Q.A
PIC-BLK

C116 25V 1-.01
R111 47K
R788 100

(43) (42)

COMPO VIDEO

(38)
(60)
(4.5.8.47.48.60)
(8)

R781 47K
R782 47K
R768 47K
D703 1N4148
R787 2.7K
R775 100
R776 100
R785 100
C721 1000
C722 1000

P-ON I²C SW MUTE OPTION AT-OFF TX (SDA) DOWN ADJ SW (SCL) SW VOL PDN-H AV1-H AV2-H RF-AGC

XLC IN H SYNC V SYNC OSD B G R BLK SDA TX SDA SCL TX SCL L-V5 CLOCK SW VOL SHARP HP VSS NC VDD

R720 10K
R719 100
R722 100
R725 100
R728 100
R731 100
R735 100
R774 100
R740 100
R715 1K
R749 12K
C716 50V 4.7

IC702
X24C04P
E²PROM

C718 16V 3300μ
L702 1μH

IC954
μPC78M05
5V REG

Q554
JC501-Q.A
POWER-OFF
-SW-2

R567 100
R568
R569
5V

IC361
TA8200AH AUDIO-AMP

IC202
NJM2209S
SHARPNESS

R234 39K
R212 390
R210 5.6K
R211 1.3K
R213 2.7K
R208 220
R209 10μ
R235 27K
L201 68μH
C219 Z-.01
C205 .33
C206 4700
C207 25V 4700
C208 .22
C215 25V 10μ

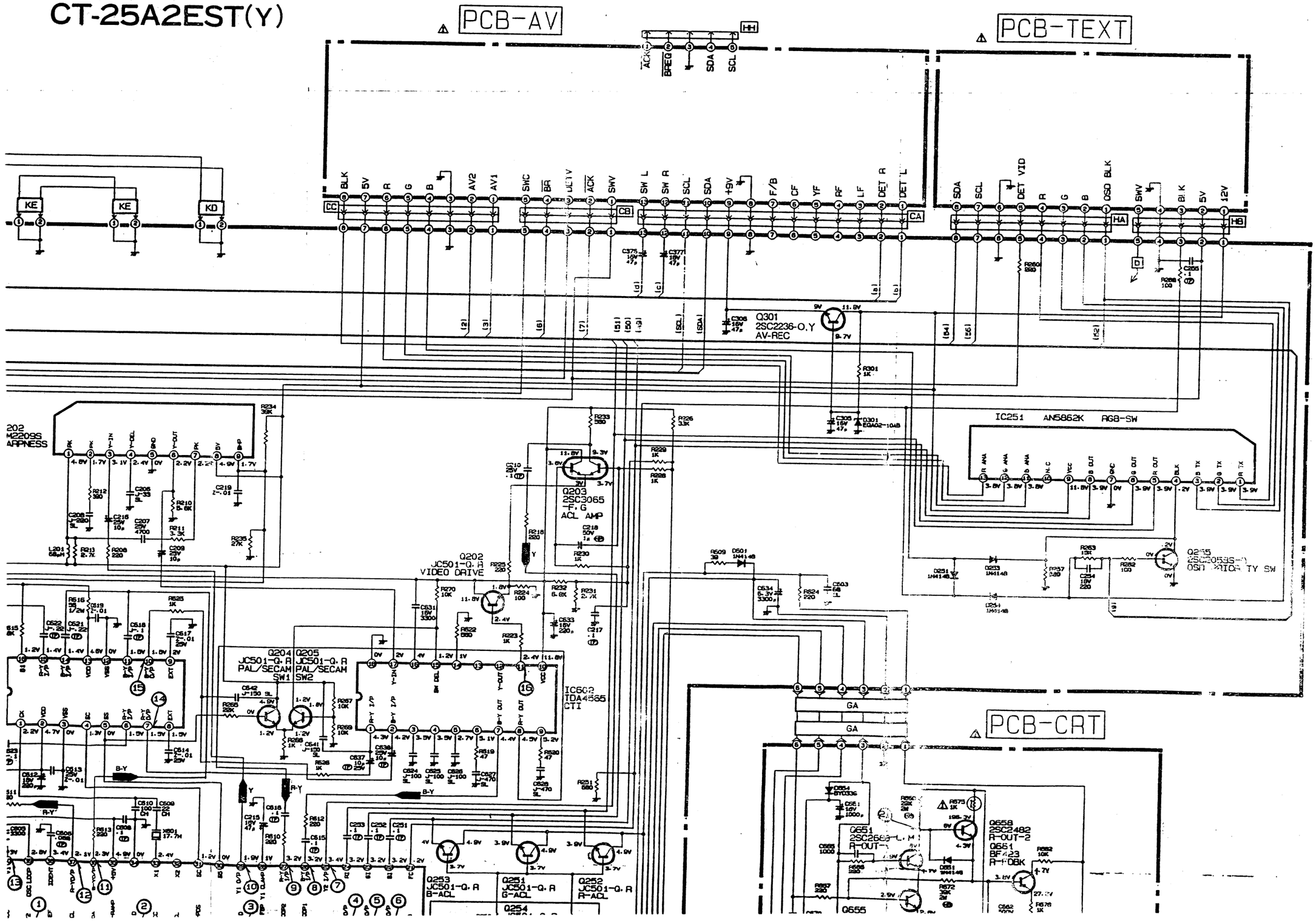
IC601
MC44140
DELAY
LINE

Q204 Q205
JC501-Q.A JC501-Q.A
PAL/SECAM PAL/SECAM
SW1 SW2

R615 68K
R616 56 1/2W
R623 1K
C619 Z-.01
C622 .22
C621 .22
C618 .1
C617 Z-.01
C542 150
R257 10K
R269 10K
R268 1K
R541 150
R526 1K
C541 150
C514 Z-.01
C513 Z-.01
C512 16V 220μ
R614 10
R511 220
R523 47K
R512 220
C201 .82
R202 220
R201 220
C504 50V 1
L202 4.7μH
C505 3300
C506 .068
C508 .1
C509 22
C510 100
R513 820
C516 .1
C515 .1
R512 220
R510 220
C215 16V 47μ
X601 17.7M
R236 1.2K
R237 1.2K
R238 1.2K
R239 1.2K
R240 1.2K
R241 1.2K
R242 1.2K
R243 1.2K
R244 1.2K
R245 1.2K
R246 1.2K
R247 1.2K
R248 1.2K
R249 1.2K
R250 1.2K
R251 1.2K
R252 1.2K
R253 1.2K
R254 1.2K
R255 1.2K
R256 1.2K
R257 1.2K
R258 1.2K
R259 1.2K
R260 1.2K
R261 1.2K
R262 1.2K
R263 1.2K
R264 1.2K
R265 1.2K
R266 1.2K
R267 1.2K
R268 1.2K
R269 1.2K
R270 1.2K
R271 1.2K
R272 1.2K
R273 1.2K
R274 1.2K
R275 1.2K
R276 1.2K
R277 1.2K
R278 1.2K
R279 1.2K
R280 1.2K
R281 1.2K
R282 1.2K
R283 1.2K
R284 1.2K
R285 1.2K
R286 1.2K
R287 1.2K
R288 1.2K
R289 1.2K
R290 1.2K
R291 1.2K
R292 1.2K
R293 1.2K
R294 1.2K
R295 1.2K
R296 1.2K
R297 1.2K
R298 1.2K
R299 1.2K
R300 1.2K
R301 1.2K
R302 1.2K
R303 1.2K
R304 1.2K
R305 1.2K
R306 1.2K
R307 1.2K
R308 1.2K
R309 1.2K
R310 1.2K
R311 1.2K
R312 1.2K
R313 1.2K
R314 1.2K
R315 1.2K
R316 1.2K
R317 1.2K
R318 1.2K
R319 1.2K
R320 1.2K
R321 1.2K
R322 1.2K
R323 1.2K
R324 1.2K
R325 1.2K
R326 1.2K
R327 1.2K
R328 1.2K
R329 1.2K
R330 1.2K
R331 1.2K
R332 1.2K
R333 1.2K
R334 1.2K
R335 1.2K
R336 1.2K
R337 1.2K
R338 1.2K
R339 1.2K
R340 1.2K
R341 1.2K
R342 1.2K
R343 1.2K
R344 1.2K
R345 1.2K
R346 1.2K
R347 1.2K
R348 1.2K
R349 1.2K
R350 1.2K
R351 1.2K
R352 1.2K
R353 1.2K
R354 1.2K
R355 1.2K
R356 1.2K
R357 1.2K
R358 1.2K
R359 1.2K
R360 1.2K
R361 1.2K
R362 1.2K
R363 1.2K
R364 1.2K
R365 1.2K
R366 1.2K
R367 1.2K
R368 1.2K
R369 1.2K
R370 1.2K
R371 1.2K
R372 1.2K
R373 1.2K
R374 1.2K
R375 1.2K
R376 1.2K
R377 1.2K
R378 1.2K
R379 1.2K
R380 1.2K
R381 1.2K
R382 1.2K
R383 1.2K
R384 1.2K
R385 1.2K
R386 1.2K
R387 1.2K
R388 1.2K
R389 1.2K
R390 1.2K
R391 1.2K
R392 1.2K
R393 1.2K
R394 1.2K
R395 1.2K
R396 1.2K
R397 1.2K
R398 1.2K
R399 1.2K
R400 1.2K
R401 1.2K
R402 1.2K
R403 1.2K
R404 1.2K
R405 1.2K
R406 1.2K
R407 1.2K
R408 1.2K
R409 1.2K
R410 1.2K
R411 1.2K
R412 1.2K
R413 1.2K
R414 1.2K
R415 1.2K
R416 1.2K
R417 1.2K
R418 1.2K
R419 1.2K
R420 1.2K
R421 1.2K
R422 1.2K
R423 1.2K
R424 1.2K
R425 1.2K
R426 1.2K
R427 1.2K
R428 1.2K
R429 1.2K
R430 1.2K
R431 1.2K
R432 1.2K
R433 1.2K
R434 1.2K
R435 1.2K
R436 1.2K
R437 1.2K
R438 1.2K
R439 1.2K
R440 1.2K
R441 1.2K
R442 1.2K
R443 1.2K
R444 1.2K
R445 1.2K
R446 1.2K
R447 1.2K
R448 1.2K
R449 1.2K
R450 1.2K
R451 1.2K
R452 1.2K
R453 1.2K
R454 1.2K
R455 1.2K
R456 1.2K
R457 1.2K
R458 1.2K
R459 1.2K
R460 1.2K
R461 1.2K
R462 1.2K
R463 1.2K
R464 1.2K
R465 1.2K
R466 1.2K
R467 1.2K
R468 1.2K
R469 1.2K
R470 1.2K
R471 1.2K
R472 1.2K
R473 1.2K
R474 1.2K
R475 1.2K
R476 1.2K
R477 1.2K
R478 1.2K
R479 1.2K
R480 1.2K
R481 1.2K
R482 1.2K
R483 1.2K
R484 1.2K
R485 1.2K
R486 1.2K
R487 1.2K
R488 1.2K
R489 1.2K
R490 1.2K
R491 1.2K
R492 1.2K
R493 1.2K
R494 1.2K
R495 1.2K
R496 1.2K
R497 1.2K
R498 1.2K
R499 1.2K
R500 1.2K
R501 1.2K
R502 1.2K
R503 1.2K
R504 1.2K
R505 1.2K
R506 1.2K
R507 1.2K
R508 1.2K
R509 1.2K
R510 1.2K
R511 1.2K
R512 1.2K
R513 1.2K
R514 1.2K
R515 1.2K
R516 1.2K
R517 1.2K
R518 1.2K
R519 1.2K
R520 1.2K
R521 1.2K
R522 1.2K
R523 1.2K
R524 1.2K
R525 1.2K
R526 1.2K
R527 1.2K
R528 1.2K
R529 1.2K
R530 1.2K
R531 1.2K
R532 1.2K
R533 1.2K
R534 1.2K
R535 1.2K
R536 1.2K
R537 1.2K
R538 1.2K
R539 1.2K
R540 1.2K
R541 1.2K
R542 1.2K
R543 1.2K
R544 1.2K
R545 1.2K
R546 1.2K
R547 1.2K
R548 1.2K
R549 1.2K
R550 1.2K
R551 1.2K
R552 1.2K
R553 1.2K
R554 1.2K
R555 1.2K
R556 1.2K
R557 1.2K
R558 1.2K
R559 1.2K
R560 1.2K
R561 1.2K
R562 1.2K
R563 1.2K
R564 1.2K
R565 1.2K
R566 1.2K
R567 1.2K
R568 1.2K
R569 1.2K
R570 1.2K
R571 1.2K
R572 1.2K
R573 1.2K
R574 1.2K
R575 1.2K
R576 1.2K
R577 1.2K
R578 1.2K
R579 1.2K
R580 1.2K
R581 1.2K
R582 1.2K
R583 1.2K
R584 1.2K
R585 1.2K
R586 1.2K
R587 1.2K
R588 1.2K
R589 1.2K
R590 1.2K
R591 1.2K
R592 1.2K
R593 1.2K
R594 1.2K
R595 1.2K
R596 1.2K
R597 1.2K
R598 1.2K
R599 1.2K
R600 1.2K
R601 1.2K
R602 1.2K
R603 1.2K
R604 1.2K
R605 1.2K
R606 1.2K
R607 1.2K
R608 1.2K
R609 1.2K
R610 1.2K
R611 1.2K
R612 1.2K
R613 1.2K
R614 1.2K
R615 1.2K
R616 1.2K
R617 1.2K
R618 1.2K
R619 1.2K
R620 1.2K
R621 1.2K
R622 1.2K
R623 1.2K
R624 1.2K
R625 1.2K
R626 1.2K
R627 1.2K
R628 1.2K
R629 1.2K
R630 1.2K
R631 1.2K
R632 1.2K
R633 1.2K
R634 1.2K
R635 1.2K
R636 1.2K
R637 1.2K
R638 1.2K
R639 1.2K
R640 1.2K
R641 1.2K
R642 1.2K
R643 1.2K
R644 1.2K
R645 1.2K
R646 1.2K
R647 1.2K
R648 1.2K
R649 1.2K
R650 1.2K
R651 1.2K
R652 1.2K
R653 1.2K
R654 1.2K
R655 1.2K
R656 1.2K
R657 1.2K
R658 1.2K
R659 1.2K
R660 1.2K
R661 1.2K
R662 1.2K
R663 1.2K
R664 1.2K
R665 1.2K
R666 1.2K
R667 1.2K
R668 1.2K
R669 1.2K
R670 1.2K
R671 1.2K
R672 1.2K
R673 1.2K
R674 1.2K
R675 1.2K
R676 1.2K
R677 1.2K
R678 1.2K
R679 1.2K
R680 1.2K
R681 1.2K
R682 1.2K
R683 1.2K
R684 1.2K
R685 1.2K
R686 1.2K
R687 1.2K
R688 1.2K
R689 1.2K
R690 1.2K
R691 1.2K
R692 1.2K
R693 1.2K
R694 1.2K
R695 1.2K
R696 1.2K
R697 1.2K
R698 1.2K
R699 1.2K
R700 1.2K
R701 1.2K
R702 1.2K
R703 1.2K
R704 1.2K
R705 1.2K
R706 1.2K
R707 1.2K
R708 1.2K
R709 1.2K
R710 1.2K
R711 1.2K
R712 1.2K
R713 1.2K
R714 1.2K
R715 1.2K
R716 1.2K
R717 1.2K
R718 1.2K
R719 1.2K
R720 1.2K
R721 1.2K
R722 1.2K
R723 1.2K
R724 1.2K
R725 1.2K
R726 1.2K
R727 1.2K
R728 1.2K
R729 1.2K
R730 1.2K
R731 1.2K
R732 1.2K
R733 1.2K
R734 1.2K
R735 1.2K
R736 1.2K
R737 1.2K
R738 1.2K
R739 1.2K
R740 1.2K
R741 1.2K
R742 1.2K
R743 1.2K
R744 1.2K
R745 1.2K
R746 1.2K
R747 1.2K
R748 1.2K
R749 1.2K
R750 1.2K
R751 1.2K
R752 1.2K
R753 1.2K
R754 1.2K
R755 1.2K
R756 1.2K
R757 1.2K
R758 1.2K
R759 1.2K
R760 1.2K
R761 1.2K
R762 1.2K
R763 1.2K
R764 1.2K
R765 1.2K
R766 1.2K
R767 1.2K
R768 1.2K
R769 1.2K
R770 1.2K
R771 1.2K
R772 1.2K
R773 1.2K
R774 1.2K
R775 1.2K
R776 1.2K
R777 1.2K
R778 1.2K
R779 1.2K
R780 1.2K
R781 1.2K
R782 1.2K
R783 1.2K
R784 1.2K
R785 1.2K
R786 1.2K
R787 1.2K
R788 1.2K
R789 1.2K
R790 1.2K
R791 1.2K
R792 1.2K
R793 1.2K
R794 1.2K
R795 1.2K
R796 1.2K
R797 1.2K
R798 1.2K
R799 1.2K
R800 1.2K
R801 1.2K
R802 1.2K
R803 1.2K
R804 1.2K
R805 1.2K
R806 1.2K
R807 1.2K
R808 1.2K
R809 1.2K
R810 1.2K
R811 1.2K
R812 1.2K
R813 1.2K
R814 1.2K
R815 1.2K
R816 1.2K
R817 1.2K
R818 1.2K
R819 1.2K
R820 1.2K
R821 1.2K
R822 1.2K
R823 1.2K
R824 1.2K
R825 1.2K
R826 1.2K
R827 1.2K
R828 1.2K
R829 1.2K
R830 1.2K
R831 1.2K
R832 1.2K
R833 1.2K
R834 1.2K
R835 1.2K
R836 1.2K
R837 1.2K
R838 1.2K
R839 1.2K
R840 1.2K
R841 1.2K
R842 1.2K
R843 1.2K
R844 1.2K
R845 1.2K
R846 1.2K
R847 1.2K
R848 1.2K
R849 1.2K
R850 1.2K
R851 1.2K
R852 1.2K
R853 1.2K
R854 1.2K
R855 1.2K
R856 1.2K
R857 1.2K
R858 1.2K
R859 1.2K
R860 1.2K
R861 1.2K
R862 1.2K
R863 1.2K
R864 1.2K
R865 1.2K
R866 1.2K
R867 1.2K
R868 1.2K
R869 1.2K
R870 1.2K
R871 1.2K
R872 1.2K
R873 1.2K
R874 1.2K
R875 1.2K
R876 1.2K
R877 1.2K
R878 1.2K
R879 1.2K
R880 1.2K
R881 1.2K
R882 1.2K
R883 1.2K
R884 1.2K
R885 1.2K
R886 1.2K
R887 1.2K
R888 1.2K
R889 1.2K
R890 1.2K
R891 1.2K
R892 1.2K
R893 1.2K
R894 1.2K
R895 1.2K
R896 1.2K
R897 1.2K
R898 1.2K
R899 1.2K
R900 1.2K
R901 1.2K
R902 1.2K
R903 1.2K
R904 1.2K
R905 1.2K
R906 1.2K
R907 1.2K
R908 1.2K
R909 1.2K
R910 1.2K
R911 1.2K
R912 1.2K
R913 1.2K
R914 1.2K
R915 1.2K
R916 1.2K
R917 1.2K
R918 1.2K
R919 1.2K
R920 1.2K
R921 1.2K
R922 1.2K
R923 1.2K
R924 1.2K
R925 1.2K
R926 1.2K
R927 1.2K
R928 1.2K
R929 1.2K
R930 1.2K
R931 1.2K
R932 1.2K
R933 1.2K
R934 1.2K
R935 1.2K
R936 1.2K
R937 1.2K
R938 1.2K
R939 1.2K
R940 1.2K
R941 1.2K
R942 1.2K
R943 1.2K
R944 1.2K
R945 1.2K
R946 1.2K
R947 1.2K
R948 1.2K
R949 1.2K
R950 1.2K
R951 1.2K
R952 1.2K
R953 1.2K
R954 1.2K
R955 1.2K
R956 1.2K
R957 1.2K
R958 1.2K
R959 1.2K
R960 1.2K
R961 1.2K
R962 1.2K
R963 1.2K
R964 1.2K
R965 1.2K
R966 1.2K
R967 1.2K
R968 1.2K
R969 1.2K
R970 1.2K
R971 1.2K
R972 1.2K
R973 1.2K
R974 1.2K
R975 1.2K
R976 1.2K
R977 1.2K
R978 1.2K
R979 1.2K
R980 1.2K
R981 1.2K
R982 1.2K
R983 1.2K
R984 1.2K
R985 1.2K
R986 1.2K
R987 1.2K
R988 1.2K
R989 1.2K
R990 1.2K
R991 1.2K
R992 1.2K
R993 1.2K
R994 1.2K
R995 1.2K
R996 1.2K
R997 1.2K
R998 1.2K
R999 1.2K
R1000 1.2K

10 11 12 13 14 15 16 17

S : CT-25A2EST
CT-25A2EST(Y)



IC701
CXP80424
MICON

X24C04P
E²PROM

IC954
μPC78M05
5V REG

IC704
MN1380-T
RESET

Q710
JC501-Q,R
V-SINC-INV

Q702
JC501-Q,R
B

Q703
JC501-Q,R
G

Q704
JC501-Q,R
R

Q705
JC501-Q,R
BLK

Q708
JC501-Q,R
DOWN·DET

Q706
2SC3065-F1
2SC3065-G
SDA-SW

Q707
2SC3065-F1
2SC3065-G
SCL-SW

Q903
JC501-R
ADG-SW

Q901
2SD1887
REG-OUT

Q902
JC501-Q,R
SLOW-START

IC901
TEA2261
SLAVE-
REG-OUT

PCB-POWER-SUB

ADG-COIL

AC230V 50HZ Neutral (Blue) Live (Brown)

F991 T2A

K901

T902

IC954
μPC78M05
5V REG

Q554
JC501-Q.A
POWER-OFF
-SW-2

Q553
JC501-Q.A
POWER-OFF
-SW-1

Q708
JC501-Q.A
DOWN DET

IC201
MC44000
VCJ

Q253
JC501-Q.A
B-ACL

Q251
JC501-Q.A
G-ACL

Q252
JC501-Q.A
R-ACL

Q254
JC501-Q.A
ACL DRIVE

Q501
JC501-A
H-DRIVE-OUT

IC551
TEA2031A
E/W-OUT

IC451
TDA8178S
V-OUT

Q401
JC501-A
V-POS-2

Q402
2SC2168-GY
V-POS-1

IC951
SI-3120C
12V REG

IC952
SI-3050C
5V REG

Q951
2SA950-Y
POWER-SW-1

Q952
2SC2655Y
POWER-SW-2

Q954
2SB1135-A,S
SOUND-SW-1

IC950
TEA5170
MASTER-REG-OUT

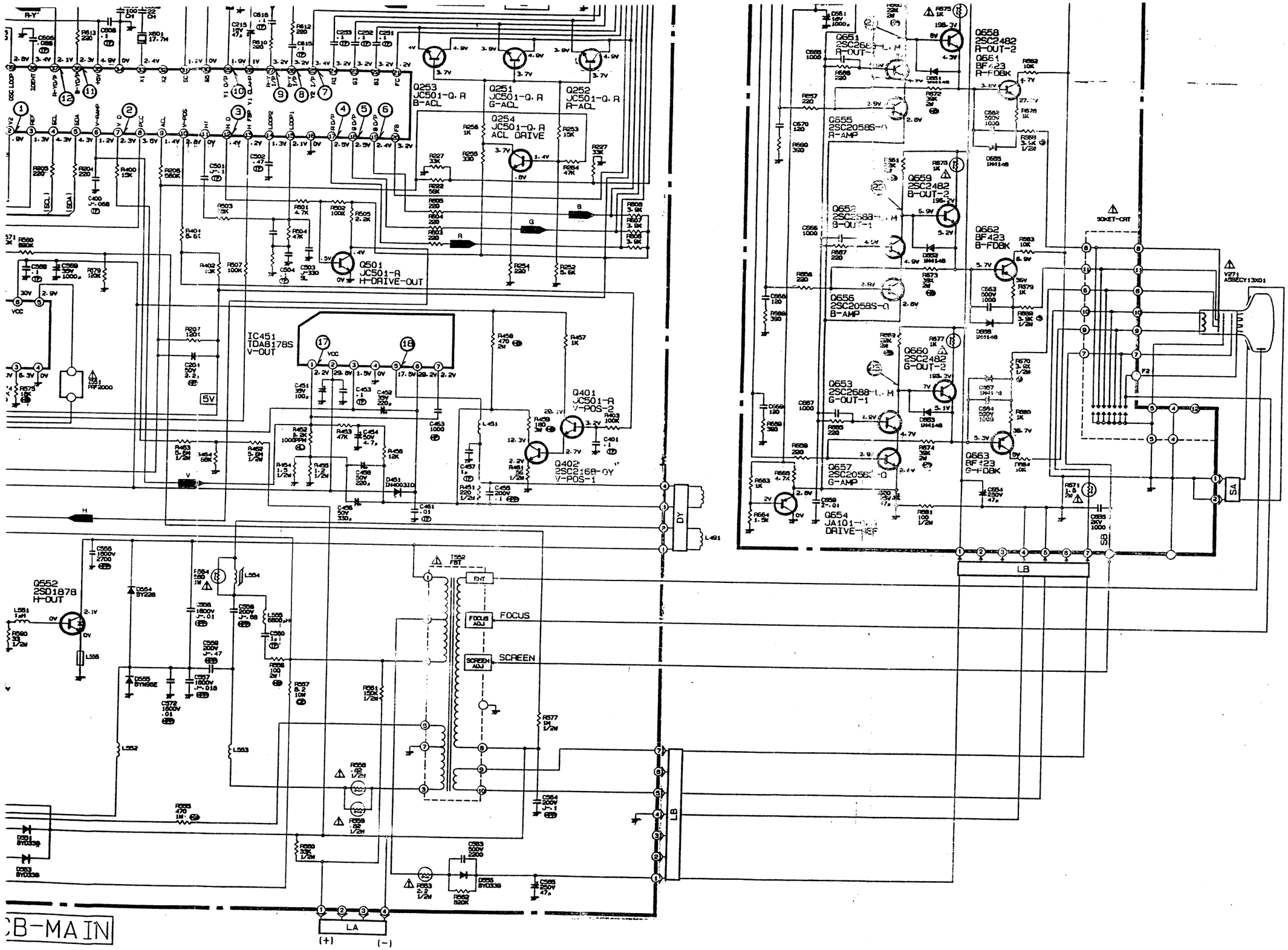
Q552
2SD1878
H-OUT

Q551
2SC2482
H-DRIVE

FOCUS

SCREEN

PCB-MAIN


Q253
JC501-Q.A
B-ACL
Q251
JC501-Q.A
G-ACL
Q252
JC501-Q.A
R-ACL
Q254
JC501-Q.A
ACL DRIVE
Q501
JC501-A
H-DRIVE-OUT
IC451
TDA8178S
V-OUT
Q401
JC501-A
V-POS-2
Q402
2SC2168-QY
V-POS-1
Q658
2SC2482
R-OUT-2
Q651
2SC2688-L,M
R-OUT-1
Q655
2SC2058S-Q
R-AMP
Q659
2SC2482
B-OUT-2
Q652
2SC2688-L,M
B-OUT-1
Q656
2SC2058S-Q
B-AMP
Q660
2SC2482
G-OUT-2
Q653
2SC2688-L,M
G-OUT-1
Q657
2SC2058S-Q
G-AMP
Q654
JA101-Q
DRIVE-REF
Q662
BF423
B-FDBK
Q663
BF423
G-FDBK
Q661
BF423
R-FDBK
SOKET-CRT
V271
A56ECY13X01
Q552
2SD1878
H-OUT
T552
FBT
FOCUS
SCREEN
DY
SA
SB
LB
LA
(+)
(-)
5V
VCC

CB-MAIN

JUN 1992

MITSUBISHI

Service Manual

In diesem Service Manual sind nur die Ersatzteile aufgeführt, die sich von denen des Grundmodells CT-21A2EST unterscheiden. Alle anderen Informationen für den CT-21A3EST sind identisch mit denen des Grundmodells.

MODEL

CT-21A3EST

MITSUBISHI ELECTRIC CORPORATION

CT-21A3EST SERVICE REFERENCE INFORMATION

Diese Information enthält nur die Ersatzteile des CT-21A3EST, die sich vom Grundmodell CT-21A2EST unterscheiden. Weitere Informationen über den CT-25A3EST entnehmen Sie bitte dem SM 871C407090 für die Modelle CT-21A2EST/CT-25A2EST.

No	UNIQUE SERVICE PARTS	SYMBOL NUMBER	PARTS NUMBER	
			CT-21A2EST	CT-21A3EST
1	CABINET FRONT		700A572010	700A572070
2	BACK COVER		700A573010	700C146070
3	LEG		761C428010	761C490010
4	LEG		761C428020	761C490020
5	PACKING CASE		801C097010	801C198010
6	PACKING BAG		831D262010	831D283010
7	CUSHION			642D488060
8	IC	IC 702	263P434020	274P188010
9	CRYSTAL RESONATOR	X 7701	285P062020	285P062030
10	CRYSTAL RESONATOR	X 7702	285P064020	285P064030
11	CRYSTAL RESONATOR	X 7703	285P139010	285P139040

{INFORMATION}

#7:
newly added on CT-21A3EST.

#8, 9, 10, 11:
Item for CT-21A3EST can be used for CT-21A2EST too

【OTHERS】